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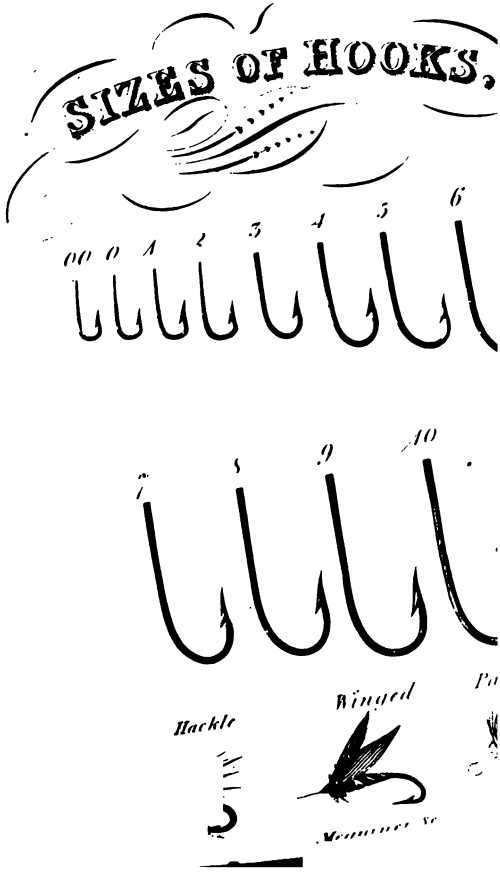
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THE

TEMPERANCE FISHING BOOK;

OR, THE

CONTEMPLATIVE ANGLER.

BEING A NEW AND COMPLETE GENERAL TREATISE ON THAT PLEASING AND HEALTHFUL RECREATION,

THE

ART OF ANGLING.

CONTAINING A DESCRIPTION OF ALL THE VARIOUS KINDS OF FISH, WITH FULL INSTRUCTIONS HOW TO ANGLE FOR THEM; THE BEST BAITS FOR THAT PURPOSE; HOW TO PROCURE THEM; THE BEST TIMES TO ANGLE; PROGNOSTICATIONS OF THE WEATHER; AND MUCH OTHER USEFUL INFORMATION NEVER PUBLISHED IN ANY OTHER TREATISE.

BY JOSEPH WELLS,
SHEFFIELD.

SECOND EDITION, IMPROVED.

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TO THE READER.

—o—

THE first copy of this work having been disposed of, and a second edition requested, the author states, that having himself had more than forty years' practice in the art of angling, in its various branches, and having also manufactured most of the implements used in the art, and having read many books on that subject; combining, therefore, experience, information, and wide observation, he does not think it presumption on his part to publish a book giving instruction and information to others. He hopes, also, by a good arrangement of the various parts, correcting, improving, and compressing the matter, so as to make it convenient for the pocket, in price and size, at the same time making it most plain and intelligible to all ordinary capacities, to render it, if possible, one of the most suitable and best general treatises on the art that has yet been offered.

to the public. And as angling is styled "th Contemplative Man's Recreation," he has en deavoured to show that there are greate pleasures and advantages attendant on an gling than the mere pleasure of catchin fish; being convinced that all books on re creations and amusements ought to embod in them some information and instructio relative to those great truths and principle wherein the welfare and happiness of all ar mainly concerned; for all well-disposed an improving minds are seeking after truth and when found, it is a duty to convey it t others. This has here been attempted b the Author; and however others may diffe either in practice or opinion, from anythin here advanced, he hopes the reader will giv it a fair and impartial consideration an investigation, on the condition that the tes to prove and try it by, must be Natur and the Bible.

THE

CONTEMPLATIVE ANGLER.

It is proverbial that most people have their hobby, or some peculiar way of enjoying or recreating themselves, generally as a relaxation from business or regular employment, according as their tastes or inclinations lead them. That relaxations are necessary to both the health and happiness of mankind, we think no one will attempt to deny, and Solomon in his wisdom says there is a time for every good thing under the sun;

> "A time to work, a time to play,
> A time to sing, and a time to pray."

Recreations are of many sorts, but may be classed under two heads, the active and the sedentary; but it is of importance in making choice that they should be both healthful and instructive, or at least harmless, not productive of any evil consequences, and in accordance with our circumstances, observing temperance in all things. Of all the sedentary recreations, we think there is none so cheap or more convenient at all times, nor more instructive and entertaining and useful,

as the reading of good and proper books a
other publications, because these contain
the most accurate knowledge and wisd
man has acquired relative to all things eitl
spiritual, moral, natural, or scientific. T
reading of books, therefore, improves, e
vates, and refines the mind, and materia
assists us not only in fulfilling all the dut
of this life, but also prepares the mind
some measure for that which is to come;
that reading must not only be considered
a recreation, but as one of the great dut
of life. Those recreations that are of a m
active kind, are best calculated to promote t
health of the body, and for the filling up
our time, such as holidays, &c. And of
others, we think, especially to the inhabita
of large towns who are pent up in an
wholesome atmosphere, those are best tl
secure the enjoyment of pure, fresh air in t
open country, where they get away from b
the vices and artificial productions of m
to view, enjoy, and contemplate the beaut
and productions of the natural creati
which is calculated to draw the mind fr
the creature to the Creator. And for t
purpose railways now happily give great
cilities. Now if there is one active recreati
better calculated than most others to ansv
all these purposes, in my opinion it is the
and practice of angling. Having now f
lowed and practised the same for more th
40 years, much to the benefit of both bo

and mind, I am strongly induced to recommend angling as a recreation to all those who can acquire a taste for it. Angling from its peacefulness and the gentleness required, is called the gentle art, and from its being pursued almost entirely among the beauties of nature, is not only fitted for contemplative minds, but is calculated to induce a reflective disposition, therefore it is also called the contemplative man's recreation. It is most successfully practised when nature smiles in all her beauties, either in the freshness of spring, the fulness of summer, or the ripeness of autumn, and is also best followed by a person being alone. The mind then is left to its own natural reflections, and can best appreciate the works of Providence. Angling may also be consistently followed by persons of all ages and stations in life.

> "The school boy leaves his home and book,
> With rod, line, and hook, to angle in the purling brook."

And many of the most eminent men this country can boast—philosophers, poets, divines, painters, sculptors, and scientific men, have made angling one of their main recreations, and one of the oldest men that this country ever produced, one Henry Jenkins, born at Bolton, in Yorkshire, in 1500, it is recorded of him that he fished much of his time for 140 years, and died at the great age of 169 years, proving the healthfulness of

angling to prolong life. Our Saviour ch
poor fishermen for his twelve disciples, a
he commanded them to cast nets and hoc
into the water, and likewise worked mirac
with fish, all proving the lawfulness of
gling. It is also a great cultivator of tl
needful virtue, patience, and is calculated
soothe the mind under the cares and troub
of life; therefore, in order to prove what
here advanced, we will endeavour to descri
how an angler may profitably spend the d
interspersing a few reflections.

The angler, from a necessary habit of l
profession, is up by break of day, kneels
the footstool of Providence, and asks favc
and protection by repeating that univer
and nearly all-sufficient prayer taught by c
Lord. Then packing up some provisions
the day,

> "He leaves the town, its smoke and care,
> For flowery fields and prospects fair."

His intention may be to fish in the mou
tain stream some ten or twelve miles distai
he has not gone far, when the sun rising
all his glory—

> "And casts a glowing radiance around,
> Sparkling in the dew-drops that bestrew the
> ground."

The morning air is refreshing; he becon
cheerful and elevated, casts away dull c
and gives himself up to the pleasant scer
around, and the grateful emotions they c

forth; then quickening his pace in hopes of a good day's sport, takes his road through lanes, over stiles into fields waving with corn or grass, snuffing the air perfumed with the hawthorn bloom or the honeysuckle. The barn-door cock as he loudly hails the morn, the sprightly lark soaring aloft and singing his matins in the sky, and the cuckoo's cheerful note, come softly through the air. Then drawing near a farmhouse, he spies the blooming milkmaid with her pail, whom following to the door, he requests the purchase of a basin of new milk from the cow; then taking a crust of bread from his pocket, he partakes of one of the most wholesome repasts. As bread, or the produce of grain, and other farinaceous or floury substances, from their being best adapted for the food of man, are called the staff of life; so milk, from its pure simple nature, and its being ordained by Providence as the main food for the support of infantile life, and being also capable of yielding both solid and liquid foods, such as cheese, butter, milk whey, &c., may be called the food fountain of life, and is one of the most wholesome aliments in nature, suitable for persons of all ages and stations of life. We find that Providence has provided those things that are most suitable and best adapted for food, in the greatest abundance, and at the cheapest rate; and if people would but live according to natural dictates, or the true instincts of nature in the taste or smell of

food, and partake of the plain fru
other productions of the earth, with o
ple cooking and consistent intermi
food and drink, salt and sugar, or th
and sacharine, being their only o
sances, (both these being great corre
putrescence and acidity, and are a
elements in nature,) and drink pur
as their only drink to quench the thi
would act more wisely and in harmo
nature. We see that animals and ve
drink only pure water to quench the
and are satisfied, existing in all thei
and perfection. Water is also t
diluent, dissolvent, and purifier in
The greatest portion of our bodies,
water. Then what can assimulate
better with the body as a drink, t
water of which it is mainly compose
ter is also a great curer and reliever
diseases, neither causing nor aggravat
that we know of. As regards ani
we believe it had better not be indu
because being the most stimulati
heating of all foods, it should be s
eaten, and less is required in sum
winter, or in warm weather than
more suitable for the laborious empl
than the sedentary, and for the low a
than the fat and full state of the bod
people affirm that animal food is not
tural food of man, that the structur
body and teeth prove he is not nat

flesh eating animal; and we do find that the monkey tribes, whose bodies in their form approach nearest to that of man, that they are all fruit, root, or vegetable eating animals. We also find it recorded in sacred writ, that when God fed the Israelites in the wilderness, it was with manna, a vegetable production, and their drink was pure water from the rock. And the land of Canaan, to which they were going, was represented to them as a land flowing with milk and honey. Also, when Christ fed the people, the flesh of fish was used, but then there were five barley loaves and only two small fishes. There is no proof our Saviour did eat the flesh of any land animal, or that he either drank or made any intoxicating drinks. We do believe man may abstain entirely from animal food, and yet enjoy full physical health and perfection, and both the body and mind be kept in a more calm and subdued state than when animal food is used, and for an animal to eat voraciously of an animal, we think, shews at least a vicious appetite, and an animal propensity. Then would we but follow the temperate and natural course of things, we most likely would be more healthy, contented, virtuous, and happy, more likely to live out the period of time allotted to man, fully and lawfully gratifying all the necessary and pleasurable appetites of the body, and better qualified for all kinds of pure mental and intellectual enjoyments. In short, plain,

natural, and lawful living is the true and most luxurious mode of living, moderation and exercise being the best physicians, and a good appetite the best relish. Then the golden rule of temperance, especially as regards food and drink, would seldom be broken; for intemperance is the transgressing of the law, eating the forbidden fruit.

We will here remark that nature has given to man two great and principal indexes whereby to regulate the physical state of his body. These are the pulse and the intestinal canal. The pulse, in its most healthy state is said to be at the rate of 74 pulsations in one minute, when taken in a regular, calm state of the body. When it has got to 98 the body is at blood heat, and may be said to be approaching near to the fever state, which is 112 This increase in the pulsations may be caused by anything that inflames the body, as the drinking of spirituous liquors and intoxicating drinks, stimulating food or eating to excess, intense affections of mind as anger, excessive joy or love long continued, and violent exercise of body, also by the bowels being in too bound state Therefore, before a remedy is applied to cure an inflamatory or feverish state of the body, the main cause should be ascertained, and treated accordingly by taking a course opposite to that which has produced the inflamatory state, drinking water, on plain, cooling, natural food, subdued

passions and resting the body, taking as medicines the acid fruits, cooling and opening solids, and liquids. When the pulse is too low and weak, which may be caused by the food not being sufficiently nutritious and stimulating, or want of sufficient exercise, particularly in cold weather, or by great grief, fear, or despondency, the remedy in these cases is to live on more nutritious and stimulating food, to take much exercise, to keep up the spirits by driving away grief, fear and care, trusting to Providence and your own endeavours. Then as regards the state of the bowels, one healthy evacuation per day is considered the most healthful. Every person should endeavour to regulate his body by his food or diet, and not by taking medicine. A too bound state of the body is generally produced by eating bread made of the finest flour, preparations of rice, boiled old milk, refined sugar, cheese, too stimulating foods, dishes containing the hot spices, as nutmeg, pepper, cinnamon, ginger, &c., &c.; and one great cause often is the want of sufficient daily exercise to keep the body in health. On the contrary, a loose state of the body is often nature relieving herself of something offensive in the system; but if it should continue too long and weaken a person, then it requires the above astringent articles of diet. As soon as the disorder is removed, the plain, neutral, nutritious substances are the best. Perhaps one of the

best regulators of the body, or diet for a person subject to constipation of the bowels, is brown or coarse bread made of the middle pollen or bran, otherwise called coarse sharps, by scalding them with boiling water into the consistency of stiff paste, and when cold adding good flour, yeast, and salt, sufficient to make up into bread, regulating the coarseness as the body requires. The bread should be eaten with new milk or butter. Animal and vegetable foods, it is better to take together, or to eat only two dishes at one meal. Eating of a great variety of dishes conduces to both excess of food and derangement of the stomach. Water drunk cold will cool the body and reduce the pulse, and when taken warm will infuse heat into the body and raise the pulse, and taken neither hot nor cold, it is neutral; yet in all cases its effect is to regulate, assimulate, dissipate, evaporate, and recreate; it can qualify, liquify, and purify we believe in all cases it is of benefit. Wer a person to be immersed in water heated u to 120 or 130, he would soon die of heat an exhaustion, and if immersed in cold wat at 31, he then would in time die of cold a starvation. Then suppose a person to for a considerable time immersed in water the medium, or at about 81, the heath temperature, would there not be a prob lity he would receive benefit? In most c of a deranged system, it would be like r

lating the body to the proper healthy temperature.

Here we will endeavour to state what are the principal natural causes of both external and internal diseases. External diseases are principally caused by the body being exposed or coming in contact with sudden extremes of heat and cold. For instance, if a person comes in contact with fire, he is burnt by the part being suddenly heated; and if he comes in sudden contact with, or is long exposed to extreme cold, he is starved or suddenly cooled, the system receives a violent check, and inflammatory disease of the parts most affected or exposed is the consequence, which ends, in most cases, by Nature effecting a cure by a gathering or separation of the part most affected. The outward introduction of poisons into the system will also produce diseases, as also the coming in contact with putrid substances, the stings of wasps, and the bites of venomous animals, and also poisonous vegetable substances.

Internal diseases are most generally produced by what is taken into the stomach, as highly stimulating foods, spirituous liquors, and intoxicating drinks, and by other poisonous substances being taken into the stomach, and also by intemperance or excess in eating and drinkiug. These generally produce diseases of the stomach, liver, heart, intestines, &c. These, both the external and

internal, may be called, mostly, local. diseases, affecting particular parts only. Sometimes diseases are general, affecting the whole body or system, particularly those producing high fever, often induced by breathing tainted and impure atmosphere, and affecting the lungs, &c. The average life of man is said to be seventy years, that is, supposing he is born with a healthy constitution. Then, taking the healthy pulsations at from 70 to 80 beats to the minute, the life of man may be said to consist of a certain number of pulsations. Now, when the body, is overtasked by intemperance and unnatural excitement, which makes the pulse beat considerably quicker than 80, life is hurrying on at an unnatural rate, and the 70 years' pulsations, are expended long before his time. Then, the person thus affected, if he does not die previously of disease, dies of premature old age. But, on the contrary, a person leading a temperate, calm, virtuous, and contented life, the pulsations would be, on an average, below the standard; therefore, such persons would not only be more free from diseases, both external and internal, but the number of pulsations would reach much beyond the period of 70 years before they were expended. Then, again, if a person with a inflamed, bloated, and over fed body, caused by intemperance, should meet with an accident, the consequences are often *fatal*. The scratch of a pin or a rusty nail

has been sufficient to cause death; for the inward inflamed state of the body has an affinity with the outward part affected, or inflammation, and from the previously deranged state of the body, the efforts of nature to relieve are rendered powerless, and death is the consequence; while, on the contrary, if the temperate man, with his cool body, should sustain a severe accident, attended with broken bones or ghastly wounds, he would generally, taking all things into account, soon recover from his injuries, there being no previous disease or inflammation, and Nature having full play to do her best. Only give Nature fair play, she can do more for us than all the doctors in the world. We will here give one instance in the life of John Elwes, Esq., the renowned miser, who may be said to have starved himself rather than to have lived, that he happening to fall and bruise both legs, it was with great difficulty he was prevailed upon to send for a doctor, and he would only consent upon these conditions—that the doctor should undertake one leg, and the other be left to Nature, and if Nature's leg was cured first, the doctor was not to be paid for the other. Nature did cure first, and the doctor lost his pay.

We will here state another thing as regards the consequences of intemperance. Drunken and intemperate parents may have children; but what are they? Most frequently puny, good-for-nothings, born with a pre-

disposition to both disease and intemperanc
who live out a brief existence, a trouble t
themselves and a nuisance to society, verif
ing the divine saying, that the sins of th
parents are transmitted to their childre
"unto the third and fourth generation;" an
this is a great evil.

We here caution and advise all persons t
abstain from those injurious customs an
habits, the using and smoking of tobacco an
the drinking of spirituous liquors and intox
cating drinks; for both these practices a
contrary to the command of God and th
laws of nature, degrading and enslaving bot
the body and the mind. We say the smo
ing of tobacco degrades a man below th
brute creation; for dogs, cats, monkeys, an
we believe all brute animals, hold tobacco i
detestation, and a man looks more fiend-lik
than angelic when belching forth fire an
smoke. Tobacco is a highly poisonou
substance to animal life, so much so that i
is not used even by the medical professio
as a medicine. The smoking, snuffing, an
chewing of tobacco, are unnatural and inju
rious customs, affecting the nervous system
depriving the body of that useful juice, th
saliva, blunting the finer sensibilities of ou
nature, depraving the natural tastes and ap
petite, and perverting the best affections; fo
thousands will bend to this idol, tobacco, an
the idolatrous and heathenish customs con
nected with it, morning and evening, an

never think of serving their Creator. Tobacco is also a great temptation to a more injurious custom, the drinking of spirituous liquors and intoxicating drinks, the evil effects of which are too well known to need describing here, and to detail them would fill a volume. We will only make a few remarks on these drinks, principally as regards the making and selling them. The making of spirituous liquors and intoxicating drinks to be drunk as a beverage, is the destroying of the most precious fruits of the earth designed by Providence to be eaten as food, in order to extract an element to poison, or make impure that water which God intended we should drink pure, so that it is a robbery of food and an adulteration of the drink. If we want exhilaration with out meals, we can get it in the food where God hath placed it. The stimulus received into the body by food is natural and in its proper place; the stimulus taken in intoxicating drinks is unnatural and out of order. Why, then, take the spirit out of the food and put it into the water containing none, and intended only to supply simple moisture to the body that at all times is mostly composed of water? Can man be wiser than his maker? To purify what is impure is well, but to make that impure which before was pure is not so. When we thus see the good intentions of the Creator towards man so shamefully frustrated, and his natural law so grossly

and extensively violated, is it to be w
at that such wide-spread destruction
be the consequences? The evil e
these drinks is a convincing proof th
is sin at the bottom; for evil is not p
by the keeping and obeying the law,
the breaking of the law; and so wid
are the evils of these drinking custo
it not only materially mars the happ
the human race, but nearly all
tions of the world may be said to be
less directly enslaved by them, the i
suffering along with the guilty.
this is caused by adulterating or pe
simple pure water. The evils ca
drinking intoxicating drinks are but
known, they have been calculated o
over again. Socially, economically
tically, and morally, they have bee
on, lectured on, legislated on, and p
on, and yet they still exist in fu
although the main cure and reme
simple to know and apply as the chi
book, consisting in nothing more t
staining from them, and drinking pu
alone, which we can get for nothi
away for nothing, and can afford t
away as if it were good for nothi
believe the time is drawing near, u
world marches backward, when all
and well-disposed persons will be
that the selling of and trading in
and intoxicating drink to the pu

ral, and should not be allowed. The law present as regards some poisons, does not ow of their being sold indiscriminately, ; only to known parties, or for certain pur- es, a witness in some cases being re- red, and even then the packet must be elled with the word "Poison." Then as ards intoxicating drinks, the law here is onsistent with itself, for it not only allows sonous drinks to be sold and taken, but wise grants a licence for the continuance the practice, thus protecting the gin ace and the tobacco store, and allowing m to set forth all their decorations and actions to deceive the unwary public. Is this contrary to sound policy, and utterly variance with the principles of good ernment? Why is this done? Because reat revenue is derived to the state by the of these things; the burden of the taxes ng taken from the shoulders of the more lthy, who are the most able to pay, and own upon the poor and miserable drunk- s. This is being penny wise and pound ish, for it costs a great deal more than revenue gains, attempting to remedy the s caused by the sale of them. Must not filling and polluting of the national sury with the proceeds of unrighteous nmon, be not only a national disgrace, *highly* offensive to God, particularly in *ntry* professing to be christian, the land *bles* and of freedom, that boasts of set-

ting an example to other nations? It is even condemned by our own law, which makes the knowing receiver of the plunder equal with the burglar; and for the righteous to connive at the wicked sinning, is to make themselves unrighteous. We read that Saul lost his kingdom for partaking of unrighteous mammon contrary to the command of God. Are not the two great objects of all law to restrain the evil and promote the good, by taking and punishing crime, fraud, adulteration, which, if carried out, would operate to the restraining of all intemperance; and on the other hand, encouraging and promoting all the needful, necessary, and convenient trades of life, tending to give peace and plenty to all? God is unchangable in his nature and true, and we always find the same natural causes lead to the same natural results; and all his works are founded in temperance, and he governs by temperance, that true centre between the two extremes, whether it regards quality or quantity. He has given all his laws for our guidance, and we are required to obey and to put them into practice, both individually and collectively; and all good human laws are but adaptations or the carrying out of the divine laws, to suit the various circumstances of men. Government is the conservator of the public interests and rights. God punishes the transgression of his laws *by natural* and timely consequences, and by

ıe operation of his mysterious providence, naking all the world subservient to his purposes. Man punishes speedily and mostly by fine and imprisonment, to keep down the evil. All this, we think, proves the necessity of putting down these drinking and smoking practices; the more extensive the practice and the greater the evil, the more necessary is a speedy and thorough change. God raineth equally upon the just and the unjust, and exhibits the beauties of the natural creation to all beholders, and should we not also endeavour to distribute publicly and equally, among all classes, the true pleasures and enjoyments of life, giving the greatest amount of happiness to the greatest numbers, instead of encouraging the gratification of the vicious and sinful appetites, which throws a great responsibility on the entire nation? Temperance will not apply to the drinking intoxicating drinks as a beverage, or the use of tobacco, except when ordered as a medicine, for all using of these poisons is intemperance, differing only in degree.

The angler having now refreshed himself, makes his way over the rising ground for several miles, interspersed with gentle valleys, until at last he gets on the top of the high moors. How changed is the scene! He views extensive wastes, covered over with brown heather, and fragmentary rocks, a few straggling sheep only varying the scene,

and no sound save the bleating of sh
the whistling of the wind, or the deep-to
cackle of the moor-fowl. And here the an
can enjoy himself. He breathes the p
mountain air, and knows that he is ab
the busy world, and almost fancies him
one step nearer heaven. He soon gets o
the moor, begins rapidly to descend int
deep romantic valley, where runs the ri
of his choice. Green vegetation again sh
itself. The gorse displays its yellow flow
near patches of pink flowering heat
Some parts of the hilly steeps are cove
with hanging woods, while rugged ro
range along the other. The hawk is soar
after his prey, and the wild pigeon coos
the thicket, blackbirds and thrushes m
the valley ring, amid the rushing of wa
and the bubbling of the springs. Hav
arrived at the bank of the river, he sits do
awhile to rest and admire the grandeur
the scene,

Where gushing waters take their course,
Or leaping from the rocks do fall;
Where storms and floods with mighty force,
'Mid lightnings' flash and echo of the thund
roll;
Where mountains rear their lofty head,
And rocks their naked fronts display,
Wild plants and flowers the ground o'erspread
Where Nature reigns in majesty!

A person passing away his time in a to
among men, may be shut up in some den

infamy, breathing an impure atmosphere, doing what is evil, that may end in his destruction; while a man recreating himself among, and contemplating the beauties and sublimities of nature, may be said to be holding converse with his Maker, learning his laws, and adding to health and life.

The angler having now put together his tackle, commences plying his art, to catch the delicately-spotted trout, or the sweet-smelling grayling, taking his course down the river, and roving from stream to stream, and pool to pool, over fallen rocks, and through green bushes, casting his line into the crystal water, watching his flies, hooking and tugging with the struggling fish, until he feels hungry again; then reclining on some sloping bank, or under the shade of a spreading tree, he takes from his pocket a ham or beef sandwich, and eats it with a relish rarely known to the pampered denizen or care-worn mortal; and for his drink there is the pure stream. He rests awhile, both to enjoy the scene, and listen to the sweet soothing music of nature.

> The trees with healthful breezes play,
> And waterfalls with varying sound;
> The birds in love songs tune away,
> And buzzing insects fly around.

Or, for a change, he plucks a flower, admires its beautiful colours and construction, or catches an insect and views its delicate and wonderful mechanism—thus reading a line

out of the great book of nature that is composed of all the beautiful and wonderful things displayed in the works of creation. This is the book which the philosopher and astronomer contemplate, with which the poet becomes inspired, the painter and sculptor imitate, is the engineers', architects', and builders' guide, and from which the artist gets his most beautiful designs and decorations, yea all the wonderful discoveries made in the sciences, mechanics, and chemistry,—water power, air power, steam power, electric power, &c., &c., are all receipts taken out of the book of nature; for these are in continual operation in nature, and by them God himself governs the world. Man, born in complete ignorance, is progressive in knowledge, either for good or evil purposes, and he cannot see either the end of the happiness produced by the good, or of the misery caused by the evil. He is also of an aspiring, ambitious, and grasping disposition. Never satisfied, he grasps at all the powers and influences in nature; mines deep into the bowels of the earth, bringing forth the rich metals and minerals, and digs among the rubbish of ruined and buried cities, as Babylon and Nineveh, for curiosities and antiquities, proving the exhaustless riches of the earth on the one hand, and the truth of the Holy Bible on the other. And God not only permits all this, but also invites us to it, with this provision, that we devote them to good and use-

ful purposes; for he says—"Seek and ye shall find, knock and it shall be opened; if ye have but faith as a grain of mustard seed, ye shall be able to remove mountains." Yet we must come honestly by all things, and the more we get, the greater becomes our responsibility; for all things properly belong to God, and we are only intrusted with them; therefore the using them in ambitious and aggressive warfare, and in the making of intoxicating drinks to the injury and destruction of mankind, is a wilful breach of the trust imposed in us. There are only two true and main books in existence, the book of spiritual revelation, called the Scriptures, and the book of the outward and visible revelation, material creation. In the first, God revealeth himself through the medium of the spirit; in the other, we are taught to see and judge for ourselves. God made the day and the night; the day for work and activity, the night for rest and repose. We cannot, consistently with his commands, reverse the order of nature unnecessarily without commiting an act of intemperance; for were a man to work regularly during night and sleep during the day, loss of health, inconvenience, and imperfect workmanship, would be the consequences. Then we are apt to think it is not right, and that it must be attended with bad effects, for senators to be legislating for the nation at midnight when they should be asleep in their beds; it

is not consistent with the natural course a
order of things, for prudence, honesty,
tue, and wisdom, are abroad, and act in
open light of day, under the benign and l
giving influence of the glorious sun t
rules the day; the tender plants of the fi
lean towards him, open their flowers as
rises and close them again as he declin
the most harmless birds of the air and bea
of the field go to rest as the night approach
then with the night creep out the bat, the c
the thieving fox, and the prowling wolf;
night, folly and debauchery become ri
prostitution and burglary then are abr
under cover of the darkness, aided by the p
light and under the baneful influence of t
small inferior planet, the moon, that ru
the night. We are commanded to be ob
ent to the superior powers or influences,
must put the inferior away. The light an
day are superior to darkness and the n
the things that are natural to the thing
are artificial, and truth is superior to
Christ also said, "We must work w
is yet day; for the night cometh wh
man can work;" and there is much tr
the good old English proverb that sa

> "Early to bed and early to rise,
> Makes a man healthy, wealthy, and w

To govern a nation, we think, req
best and most powerful intellectual
ties of the day. Legislating, the

night must be contrary to right principle. But what is principle? Are not principles the laws of God and nature, all creation being made up and compounded or composed of principles or powers? A man may discover or bring to light a principle, make things or articles, and apply that principle to them, and put the article and principle into active operation, and in this consists the creative power of man; but he cannot make a principle, neither can he destroy one; he only makes use of, modifies, changes, and differently applies the things that were before created. Temperance or right is a great moral and fundamental principle, because, when applied, it is the regulator and preserver of all other principles. Be temperate in all things, means regulate all things by temperance. Wrong or evil, on the contrary, is subversive ınd has a tendency to destroy all principle; ɔr instance, a man extracts the spirit from ıod, and at the same time destroys the nutri- ve principle of food, that renders it efficient r health, and when taken from it, the food valueless. Man, then, is become possessed a principle or power in the spirit, and it ı great power. This he can devote to good put to evil purposes. When regulated nedical science, it is a great power for l to preserve animal life, and also can be ied to many other useful purposes in the ınd sciences; but when misapplied, as e making and drinking of intoxicating

drinks, or poisoning or perverting of the natural character of water, which is that it is entirely free from intoxicating property, then evil is communicated to this universal drink. Man drinks it as a beverage, partakes of the evil, and through the communicative medium of his body, the evil increases and is made capable of perverting other principles, mental and moral, with its evil influence; and thus we see how evil is propagated. Moreover, as spirit or alcohol is a fiery, inflamatory, stimulating, or driving agent or principle, this again proves the power of spirituous drinks for evil, when applied to either the animal or vegetable creation for quenching thirst, instead of the pure, natural water; for alcohol contains no constructive element to constitute it food—it is not nutritious in any degree or in any case.

There are three great natural principles or properties connected with humanity and intrusted to man, which should be held by him as sacred and inviolate: they are life, liberty and property. No person can either wantonly, maliciously, or uselessly, violate any of these either in himself or others, without committing an act of sinful intemperance. These principles are also in him inalienable and indestructible. A man may lose all his outward and unconnected property—he cannot loose himself; for he is his own property. He may be a bound slave. Man may bind man in action and in body,

but he cannot bind the spirit of man: the principle of liberty still reigns within him. He may risk and loose his life in a good cause, but he does not cease to exist: his body returns to dust, but God raises him up again to a superior existence, rewarding him for his good actions. A man may also apparently destroy himself by an evil course of life; but he does not cease to exist. The future existence of those that die in their wickedness is figuratively expressed in Scripture, and is fearful to contemplate. Christ died in righteousness to save the world and is exalted; Satan rebelled against God, was thrust out of heaven, and became the evil spirit or influence. To explain more fully—all things, both spiritual and material, are immortal and indestructible; they may be changed in form and quality but they cannot cease to exist; for all things were made and created by God, all creation existing in himself who is almighty, unchanging, and everlasting. Even evil itself, though it may be diminished or kept within bounds, cannot be utterly annihilated, until Satan himself be converted or annihilated. In all nature, we find both the good and evil influence can be applied—the right and the contrary to right, in all things; and Christ said, "Why callest thou me good? there is none good but one, that is God," who has also made all animals perfect in the structure of their bodies. A man cannot add a new part or member, nei-

ther can he deprive himself unnecessarily and materially of any part or parts of his body, without committing violence on himself to his own injury; therefore we maintain it is not right for a man to shave off his beard and whiskers. God has given these hairy appendages to his body for good and useful purposes, to distinguish the sexes, to shew the full development of the body, to promote the health and strength of both body and mind, and to beautify and dignify man. To shave them off is to disfigure, effeminate, and weaken, putting nature at greater expense; for despite of all man can do, she is making vigorous and continual efforts to recover the lost dignity. Nature, in her most prolific moods, is abundant almost to superfluity. Then it is well for man to prune, trim, regulate, and beautify, but it would be as reasonable to deprive the lion of his majestic mane, as for man to be deprived of his beard and whiskers. To make perfect what is imperfect is well, but to make imperfect what was before perfect is not so. We read that Sampson, the strongest man, lost his strength by having his hair shaved off his head. But some may here exclaim, what man art thou that teacheth? are we not to follow and practise our old fashions and customs, and regard the trades they have created? We answer, what means it who teacheth if the doctrine taught be true? The *things of* God and nature are truths, and we

care not how or when injurious fashions and customs originated, they are deceiving falsehoods. Whether is it better to be true or false, to do good or evil, to serve God or Mammon? It would be well if all illegitimate and injurious trade was stopped, and new sources of pure, free, and legitimate trade opened out in their stead. We are too apt to be led astray by others, and follow our own perverse inclinations. Would we but trust in God, he would do more for us than we can either think of or do for ourselves. This reflexion on the shaving custom may seem trifling to many, but it may affect the health and happiness of persons considerably more than some can understand; and this small circumstance alone almost proves some important things before stated, that all material things change, yet are made up of compound principles that cannot be destroyed. The beard is one thing or principle belonging to the body of man: he attempts to destroy it; he cannot do so, for it grows again even after death. It then changes into corruption and then again into dust, and there we leave it.

The angler having now again both refreshed and rested himself, inspects his tackle, then tries again to induce the finny tribes to take the hook, still going down the stream; the scene soon begins to change: he is now getting into a more open country, and the hills become less precipitous and rug-

ged, retreating in the distance. The river no longer tumbles and flows over rocks and fragments; it becomes more placid, meandering over gravelly beds, or gliding down the lengthened deeps. Green meadows stretch themselves out from each side of the stream, enlivened with the various coloured cattle feeding on the herbage. The fields again wave with corn, or are strewn with new mown hay, scenting the air. The birds are singing, the village bells are ringing;

> The plough boy whistles o'er the lea,
> The mower whets his scythe;
> Lambs they skip in harmless glee,
> And all seems cheerful, gay, and blythe.

The angler having had plenty of diversion, or seeing the sun declining in the horison, finds it a matter of necessity to pack up his tackle, he drinks again of the pure water, and casts his eye once more on that beautiful living stream he is going to leave. And what his water? It is said that water is composed of two elements or gases, oxygen and hydrogen, in the proportions of eight of oxygen to one of hydrogen, and that water is decomposed in the producing of electricity, or the electric fluid from the galvanic battery; and also that oxygen and hydrogen gases in proper proportions, by having electric sparks introduced to them, will form water. Therefore we believe that water contains three elements, oxygen, hydrogen, and *electricity* or the electric fluid, in its composi-

tion, and that water is formed by condensation caused by the electric fluid being introduced. The main proof seems to rest here —the atmospheric air is formed of 21 of oxygen to 79 of nitrogen, and nitrogen is heavier than oxygen and hydrogen—then how is it that such a heavy body as water can be formed out of two lighter substances? Must it not be that the electric fluid and condensation make up the difference? Then again, do not we always find that, during summer or hot weather, the electric fluid, thunder and lightning, most abound, caused by the decomposition of water? The electric fluid escaping to the earth which in a hot, dry time sometimes becomes positively charged with it, the gases that composed the water ascending into the atmosphere and finding their own level; and there when they become in a fit or positive state for forming water, the sun's rays and probably the electric fluid ascending from the earth also, produce vapour which is further condensed by currents of cold air, and thus clouds are formed, the larger clouds attracting the smaller. They become sufficiently dense to imbibe all the sun's rays in their passage to the earth, receiving more electricity both from them and from other clouds, until they are both highly charged with rain and electric fluid which cause heavy showers, thunder, and lightning, —all proving that electricity has a great deal to do with the formation of water. This rea-

soning has led to some very important observations and reflexions that will be found in the end of this chapter. That cold, light, heat, and electric fluid, as far as we can find, may be called influences rather than substances, spiritual more than material, appears from this that they cannot be weighed, and can pass through and along all other bodies. Both light and electricity travel as quick as thought. They are more passive than active, etherial or spiritual, not material, therefore the influence from the sun is passive to the earth, continually giving out, coming from, never returning, because the sun is positive and greatly superior, and this continued influence is the source of continual increase to the earth of both creation and the maintaining of creation. And here we will state that the equator positive and the polar negative are always stationary, while the solar positive and negative are revolving or go round the earth every 24 hours, because the earth turns on its own axis in that time, yet the solar positive and negative are always horizontal with the sun, the positive being always next and the negative the farthest from the sun. There is also another positive and another negative—they are the summer and the winter: the summer positive and the winter negative. These are also revolving, going round every 12 months, that being the period of our year, and their direction is *neither* in a line with the poles, nor with the

equator; it is betwixt the two and is called the sideral motion, or the going on one side. This positive crosses the equinoxial line twice every year, in spring and in autumn, and is called the sun crossing the line or equator. The earth also gives out a portion of influence to the moon, and the moon when at full and in the night has a very inferior influence on the dark parts of the earth. This theory of influence will be found to be consistent with all things in nature, both in the spiritual, moral, and material creation. The superior bodies or influences are always predominant. This we find to be the case in the law of gravitation, or the attractive influence of matter or bodies towards each other. Man may be said to have an independent power or principle, as connected with himself, that is, to will and to act. Then if he wills to do good, he is rendered capable of receiving or is open to the good influences that come to his assistance, and make him positive of good actions, and good is the consequence; if he wills to do evil, he is open to the evil influences that urge him on to bad actions—he is made positive of evil; and then of course, evil effects are the consequence. When he is not willing, he is neutral. Then may we always be willing for good, then good alone will be result. But to return to the subject of water. How and in what state is water found to exist in creation? It is one of the most abundant elements in nature,

and is also an essential one. It covers two-thirds of the whole surface of the earth, independent of rivers. It is the native element entirely of the largest, the smallest, and the greatest number of animals. It is so deep that man cannot fathom it, is higher than the highest snow-capped mountain he cannot reach, is clear as crystal in the fountain, black as thunder in the storm, and white and pure as purity in the driven snow. It is cold as ice, hot as fire, neither hot nor cold; it is a solid and a liquid; we can see it, feel it, taste it, smell it, and hear it; and yet, like the divine presence, we may have it within us and surrounding us, and not be conscious of it. With its icy barriers, it resisteth the raging of the mighty seas, yet in its vapour form, it turneth aside at a feather. When thrown plentifully on its greatest enemy, fire, it extinguishes, and when separated only by a very thin partition, it calmly submits until it can bear it no longer when it becomes invincible and begins to flee away, and will do so while under the influence of fire, not all the powers of man can stop its escape; if he does attempt, he must take good care of his life; it rises aloft in steam and vanishes out of sight; in its nature unchanged and undiminished. When running in the river, it also bids defiance to man; it will eventually go down to its parent ocean; when taken hold of by the icy hand of frost, it quietly yields, goes to rest, and is

stationary, making the sea its bed, the highest mountain its pillow, and the cloud its night cap; and when aroused from its frozen slumbers by the genial rays, it waketh like a giant refreshed to run its course, roars in the cataract and overwhelms in the torrent. When lashed to fury by the stormy winds, it lifteth up its waves, fearful and majestic; it thundereth in the avalanche and volcano, also shaking in the earthquake, and once it has drowned the world. Yet when polished in the placid lake, it is nature's looking glass, reflecting the sun, the clouds, the overhanging trees, and the rocky margin; it displays its beauty in the covenant rainbow, and sings in the rivulet; it hangs on the tender plant in the pearly dew-drop, and falls in gentle rain watering the earth, refreshing man and beast; cheers the vine, feeds the corn, puts new life into all vegetation, and lifts the drooping head of the delicate flower. If water were taken from the earth, all vegetation would soon cease; all animals would die; the world would become a barren, parched, frightful wilderness, abounding in and surrounded by the materials of fire and ready to be burned.

And what does water do for man as an helpmate? It carries him on its back round the world, while he tradeth with all the nations; runs with him over the land, with untiring energy, swifter than the race horse; it spins and weaves his clothing, and is beginning to do more laborious work than all

men put together, in all kinds of manufactures. It can dig the ground, sow the seed, reap the corn, thrash the corn, grind the corn, and make the bread. The thirsty fevered soul hugs it to his heart, and calls it his best friend and life-preserver. It is the principal guest at the festive board, and the banquet, in the hall: is the cook in the kitchen, and the slip-slop and wash-pot of the whole establishment. In short, water is the head and tail—the weakest and the strongest, and what we are apt to think little of is yet of the greatest importance, and were there not superior celestial powers, man would be apt to worship and adore this, one of the greatest of all earthly blessings. Then what shall we say of the wickedness and perverseness of man, that can knowingly, wilfully, and impiously pervert, corrupt, and make impure this god-like power and element, converting it into a devil, an evil to his own and others' destruction? Let us, then, quench our thirst with the pure waters, and it may prove as a well of water within us, tending in its indirect consequence to make us wise unto salvation: for, if intemperance and drunkenness can turn a steady, sober man into a fool and a madman, why should not temperance and water again convert a fool and a drunkard into a steady and a wise man?

It is said that cleanliness of person is next to godliness of thought and action; then it is

necessary to purify the whole of the body every week with water to promote and keep the health. This is easily done. Get a common wash tub, set it on a chamber floor, putting into it a sufficient quantity of lukewarm soft water. Standing on the tub, then, with sponge, soap, and coarse towel, first rinse the body, then soap and wash, then rinse again, wiping well with the towel, then wash the feet, and the operation is over. This plan for general cleanliness of the body is more effectual, convenient, and cheaper than any public baths where soap is not allowed to be used. Then we say to the man of toil, and likewise to all persons also that do not toil, that a clean skin, clean linen, and a Sabbath day of rest once a week, are comforts not to be despised.

The angler having now sufficiently rested and refreshed himself is homeward bound, taking his course through green lanes whose hedges are bestrewed with wild roses, when, hearing a voice over the hedge singing a love ditty, he recognizes the milk maid, and following to the farm, partakes again of the staff of life, and sips the pure liquid. He is soon on his road again, for the sun is setting in golden rays, gilding the church spire and illuminating the cottage windows, and giving a mellow ripeness to the eastern prospect that soon begins to vanish, and nearer objects become more dim, the breeze that blew is hushed into silence, the birds and bees

have fled to their homes, and nothing is heard save the horse and husbandman returning from their labours, the barking of the shepherd's dog, or the murmuring of the distant waters; and to close the scene, night draws over her sable mantle and veils up all earthly objects. The angler, while trudging along, has his attention suddenly arrested by a bright falling meteor, when, looking up, he perceives the canopy of heaven illuminated with glistering stars or worlds, which, though appearing so small and to stand still, are yet many times larger than this world, and are flying through the immensity of space at the rate of many thousand miles in one minute of time. In contemplating these objects, the mind becomes overwhelmed with wonder, love, and praise, and man is constrained to exclaim, "Lord, what is man that thou art mindful of him; in comparison he is as a grain of sand by the sea shore or as the dust on the balance." The angler's only thought is now to reach sweet home, to receive the smiles that await him there, where he partakes of a frugal repast, then, with the exercise and fresh air, he soon feels tired and drowsy and retires to his chamber, bows before his Maker, thanks him for all the good he has enjoyed, then throwing himself on his bed is soon half unconscious, with only the visions of green fields and trees floating through his imagination, till, finally, he sinks *into* sweet sleep and pleasant dreams.

We may here add, that we have all cause to be thankful that the seed of true temperance is sown in the land, as regards intoxicating drinks, in the carrying out of the water drinking or total abstinence principle; and it is the carrying out of an important principle. If the world progresses in virtue, it must progress also, for it has truth and righteousness to support it. Fashions and customs will change, kings may be dethroned, and empires shaken to their foundations, while temperance, truth, righteousness, these, firm as the rock of ages, and like their great author and founder, God, will endure for ever. There is a good time coming along with the temperance movement; and if temperance only becomes to be universal in all things, the time will not only be good, it will also become both beautiful and glorious.

Solomon, in his proverbs, says, there is no end to the making of books; and the subjects here touched on might have been made to have filled many volumes: that would have answered neither the reader's nor the author's present purposes; yet we hope that from the few foregoing brief pages may be drawn some instructive matter to prove the ten following things.

That the human race is yet far, very far, from arriving at that state of perfection on earth it is possible for them yet to attain to, and that many great and wide spread changes

and reforms are still required to accomplish that purpose—by reforming from evil, and progressing in good.

That those persons who are temperate, instructive, and willing to be taught, and who respect and endeavour to keep the laws, are the sane, sound-minded, peaceable, and good kind of people, the free, and the lovers and advocates of freedom; while those persons who are intemperate, destructive, and unwilling to be taught, who respect not the laws, and are careless about breaking them, are the insane, wrong-headed, and evil kind of people, these are in spiritual and bodily bondage, slaves, and advocates of slavery.

That this present life is a state of preparation or education for a better or a worse existence; that the good are rewarded with good, and the evil punished with evil; and that a change may take place at any time in man from evil to good or from good to evil.

That there is but one true God—the Creator, almighty and everlasting—and him alone we are bound to serve, worship, and obey, with all our strength and mind; we have only one true religion, that is the Christian religion; and of all men that ever lived only one High Priest, pattern, and guide, and that is our Lord and Saviour Jesus Christ.

That all human wisdom, fashions, customs, and laws are liable to great imperfections, and often prove injurious; that all true wisdom and perfection are alone found in the

laws of God and nature: on these laws we must lay the foundation of our laws, and from these alone must we raise the perfect superstructure.

That we should keep holy the Sabbath day as a sacred day of rest from all worldly commerce, trade, bodily labour, and unallowed pleasurable pastimes; and devote it entirely to the praise of God, the health of our bodies, and the necessary improvement of our minds, for our Saviour said "It is lawful to do good on the Sabbath day."

That in unity of thought, and unity of action, in a good cause, consists the strength of a people and a nation; that the evil and unnecessary things alone should be taxed, and all superfluous wealth be devoted to the general public good, all best human endeavours being but to accomplish two objects—the glory of God and the universal welfare of man, and in these are embodied the whole duty of man.

That great riches, honours, and titles may be distinctions, yet these alone cannot make men happy, nor can they ennoble, they are mostly productive of great evil. The man—

and observations on the subjects to exhibit the theory which we think explains the cause of the things which we have thought proper to repeat. 1st. To show the probable cause of the electric current round the earth, why the needle always points north, and the cause of its deviation from true north. 2nd. To explain the cause why the earth keeps its proper distance from the sun, and the probable cause why it revolves round the sun every year; also, what is the cause of its sideral or one side motion that produces summer and winter or the four seasons; also, why the earth turns round on its own axis every twenty-four hours, causing day and night, and to show that the sun and earth govern the moon by the same laws; and also, to show the probable cause why the sun turns on its own axis, &c., &c.

EXPLANATION OF THE ELECTRIC CURRENT ROUND THE EARTH.

We have before stated how water is decomposed and of what it is composed; then round the earth at the meredian or along the equinoxial line is the hottest part on the surface of the earth, the sun being there vertical or perpendicular, and may be said to enter the earth round the line, the rays being there most powerful; water then near the equinox must be most abundantly evaporated and decomposed, the gases of which *it was com*posed ascend, and are taken by the

winds or currents of air north and south, &c., while the electric fluid enters the ground. There is also to be added the descending electric fluid or the influence from the sun: these two agents or causes combined make round the equator highly positive in electricity, while in the direction of the poles a cold and negative state prevails that keeps increasing until at the poles, cold is most intense, and water there is in its most compressed or condensed state, causing altogether a negative state. Then, again, the sun's meridian or midday is always most positive, then midnight must also be negative; then we believe that there is always a strong current of electricity diverging from the equator towards the poles, or at least there would be but that the sideral motion of the earth and the midnight negative cause the current of electricity to appear to take one direction, that is from south to north, and also that the electric fluid most likely keeps most to the land, which is not at all exposed at the poles, the fluid passes on one side, and these combined causes both make the needle always turn north, and yet not due or true north, showing a variation. This current of electric fluid may be said to be the electricity of the earth finding its own level or balance on the earth, even as air and water find or seek their own balance or level. Then, again, we have observed the water in the sea is very luminous in the night, or has a fiery or phos-

phoric appearance, and also that dead sea fish are very luminous in the dark, then, we believe that the sun, shining on the mighty deeps or seas, the water imbibes the rays of light or the electric fluid descending from the sun, and this having been the case for many thousands of years the sea water has become more dense with electricity, causing it not only to be of greater specific gravity than common water, but, in all probability, being one great cause of that saltiness peculiar to sea water, therefore we believe that sea water greatly abounds with light and electricity. That the sciences of magnetism and electricity are, we believe, yet in their infancy, that great discoveries may be made that will produce wonderful effects: for instance, a person may by holding up one finger on each hand perform the same motions as are given in working the electric telegraph, and fully as quick, simply by the power of his will; then from this we are inclined to believe that the human body, or what is called animal or muscular power in moving, holding, lifting, pulling, &c., are mainly electro-magnetic, so that the body may be said to be comparable to an electro-magnetic machine; that the power of moving, holding, lifting, &c., is electro-magnetic, the will or the brain being the governor, and that it may be possible to work an electric telegraph by animal electricity alone, proving the words of the inspired Psalmist, that "man is fearfully and

wonderfully made;" and showing, also, that when we drink water we are taking in a supply of pure gases and electricity to maintain the animal economy.

EXPLANATION OF THE MOTIONS OF THE SUN, EARTH, MOON, ETC.

In the first place, we believe in the law of attraction or gravitation, or the power large bodies have to draw or attract other smaller bodies to themselves; repulsion, or the centrifugal motion, whereby large bodies have the power to throw smaller bodies from them to a greater distance; friction, whereby one substance rubbing against another substance has the power not only of taking it along with it or of turning it round, but of generating heat also; and magnetic attraction and electricity, which has the power of attracting, by fluid influence, substances towards them, or affecting them. All these we believe to be true principles or laws in nature.

The sun, an immense and glorious body, is the centre of our own or planetary system, of a certain number of worlds, this world being one of them, some of which are immensely larger and others much smaller. The sun is supposed to have no night, it is always day with him, and the Scriptures tell us that "In heaven there is no night, for the glory of the Lord is the light thereof." Now rays of light always appear straight, and verging from the centre in all directions from

the substance or body that gives them out, and when it is moved round the rays go round along with it; also the sun is said to turn round on its own axis, from spots that are perceived on its surface, once in the space of 25 days 14 hours of our time, therefore the rays go round along with it. These rays are most likely endowed with some magnetic or attractive influence, and there may be always a current of electric fluid descending with them to the earth, giving new life and new creation. As some proof that there is an influence, we find that many plants lean towards the sun's influence. The flowers open by the power of his rays, and the creeping, twisting, or running plants, as the kidney bean, &c., always twist their stems round the sticks in one direction. It is well known that attraction or gravitation and repulsion are the powers that kept or balance the earth at a proper distance from the sun. Then may not the rays of the sun, acting on the earth by attraction, take the earth round with them, or round the sun once in 365 days odd time, being the length of our year? and these same rays also acting on the atmosphere of the earth by friction and attraction, take the earth round its own axis once in also 365 days, &c, having a one side motion? This one side or sideral motion is probably caused in this manner: all round the equator, where the sun is most powerful, land more generally predominates; and more so

round that part in a line with the sideral motion. That may be the reason of the earth being drawn or moving in that direction, and of course there is more heat, attraction, and expansion both in the earth and the atmosphere. There creation is most active, productive, abundant, and there too are the highest mountains. All these causes tend to give the earth a more plump or swelled out appearance round the middle, while towards the poles water mostly prodominates —all is covered with ice and snow; at the poles, all is cold, repulsive, and contracted, vegetation scarcely existing at all, and least attractive, causing the poles to keep the most remote from the sun's rays, and which also gives them that flattened appearance. Then this side or sideral motion of the earth on its axis causes summer or winter, or the four seasons, the sun crossing the equator or equinoxial line in spring and autumn. Then again, the sun's rays, acting on the middle of the earth round the equator by friction or attraction, takes the earth round on its own axis once every 24 hours, causing day and night. The earth also governs the moon, or the earth's satellite, by the same laws of attraction, repulsion, or friction. Then as regards the sun turning on its own axis: if we look at a drawing of the solar system, we shall perceive that the course or orbit of a comet comes very near the sun, and appears like a band round a pulley that

drives machinery. Now, comets are supposed to fly at an amazing speed, as proved by leaving a tail or train of light behind them. Then, is it not probable that the quick motion of a comet leaves a stream of electricity, or some other fluid, running round its orbit, and that this current has the power or influence of turning the sun round on its axis, and may also have the power of taking the sun round the orbit of the comet also? That the sun has an orbit is in unison with the motion of all the planets. Now, if the sun does go round an orbit, of course all his planetary system goes round with him also. Then again, it is not improbable that the sun may move round some immense body, or entire central influence, round which all the universe, with all its suns and systems, revolve in perfect order and harmony, proving the majesty and mightiness of the Creator. Some might suppose it impossible that such immense and heavy bodies as worlds can be governed by apparently such small influences as here presented; but when we consider that they are hung on air, or in empty space, having no opposing friction or contending influences to retard their progress, that when once set in motion a very small continued and regular influence will support them in their places and revolutions, our wonder ceases. God governs all by temperance, regularity, order, truth, and harmony. *Here, then,* we see that there is a communi-

cation kept up by influence with all worlds, and may it not be as easy for angelic mind or influence to be transmitted from world to world, as for men to telegraph from nation to nation? Where, then, is the sceptic or unbeliever who cannot now believe and give praise to whom praise, honour to whom honour, and glory to whom glory are due both now and for evermore? For temperance, truth and righteousness exalteth a people, and by these alone will a nation be permanently established.

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THE

PRACTICAL ANGLER;

OR,

THE ART OF ANGLING

EXPLAINED.

In commencing this, the practical part of angling, it may be necessary to state, that I shall not presume to give an elaborate or scientific description of the various kinds of fish, but only such a plain account of them and their main features and peculiarities, as may be most necessary and useful to the angler; and as it may be supposed that many who read this book are beginners in the art, therefore we will commence with that part most adapted to their purpose.

BOTTOM OR FLOAT FISHING

Is fishing at the bottom, and having a float on the line to tell when the fish bite. Bottom fishing is the only method for taking many kinds of fish that do not feed upon insects on the top of the water, and all kinds

of fish may be taken all the season by the same method; it is also well adapted for a discoloured water and for very cold weather to all those fish that take the fly. The rods suitable for bottom fishing vary from eleven to eighteen feet, according to the taste of the angler and the size of the river to be angled in. We should say one twelve or fourteen feet long a very suitable size. The rod should have rings on for the line, and a spike at the bottom; it is best to have a reel for the line, then it can be lengthened or shortened at pleasure, and also to be able to give line when a large fish is hooked. The line, which is best made of hair or silk, should be twelve or sixteen yards long, and having from three to four feet of gut at the end, strong next the line and fine next the hook. A light cork or quill float is best on the line —the gut shotted about four inches from the hook to make the float cock up. The main things to be observed in bottom fishing are, to have the tackle as fine as the fish to be angled for admit for strength, the hook no larger than the bait used requires, taking care to cover the hook—in particular the point—or the fish will not bite; and always when fishing in clear water, fish where it is deep and not too near the side; if not very deep, then fish far in; for fish are very shy and quick at sight. Many novices in angling use rough and clumsy tackle with little caution, not fully aware that suspicion and cau-

tion are a natural instinct in all animals for their preservation, therefore fine and careful fishing will always insure the most success. In striking a fish to hook him when you have a bite, let it be only a gentle check, given with the motion of the wrist only. In bottom fishing in large rivers or pieces of water, it is always best to bait the ground or the place you intend to fish in, (see ground baiting,) or for more variety and exercise, when fishing for the day, bait two or three good places at some distance from each other, that when fish do not bite at one you may try the other, and do not leave the places you have baited; for if you do not catch fish there, you will have little chance elsewhere. Always plumb the depth by having a bit of lead on the hook, and fish two inches from the bottom. For more particulars and how to fish for the various kinds of fish, &c., see description of them. The single horse hair fishing, that is, having single hairs instead of gut at the end of the line, is a very fine and successful way of angling where the fish are small, and for roach, dace, bleak, &c.; but it requires striking them very gently, or you would break the line. The rod for single hair fishing should be a very light one, one with a fine, flexible top. An artificial fly rod with a very fine top is very suitable: a landing net should always be used in single hair fishing. The strength of hairs before using them may be tested by first breaking

the tender end off, and then hanging a weight to them. One that will lift a pound dead weight will kill a fish of equal weight if great care is taken. It may be well here to state, that at all the first-rate fishing tackle shops in all the large towns, all kinds of fishing tackle may be bought ready made or prepared, at reasonable prices. The juvenile bottom fisher may be fitted up with hazel rod, short line, float hooks, &c., from one shilling upwards, the man fisher for ten shillings upwards, and the artificial fly fisher for thirty shillings upwards, and at many of these shops, worms, maggots, wasp grubs, and other baits in season are often kept on sale for anglers.

A DESCRIPTION

OF ALL THE VARIOUS KINDS OF

FISH FOUND IN THIS COUNTRY;

HOW TO ANGLE FOR THEM, THE PROPER BAITS, &c., FOR THAT PURPOSE, WHEN THEY SPAWN, AND THEIR COMPARATIVE SIZES.

IT may be proper first to state, that the prevailing opinion is that fish cannot hear sounds or noises made out of the water, therefore the angler need not be apprehensive in that respect; but they are remarkably quick and strong at sight. This requires the most caution of the angler; for at the sight of any person moving near the water, they generally flee away before a person is aware of it. Fish have the faculty of smell in tolerable perfection. Fish also eat the eggs or spawn of fish, and the larger ones of prey devour great quantities of the smaller, even of their own kinds. Fish are called cold-blooded animals, because the temperature of their bodies is about the same temperature as the water they live in. They are also very sensitive to both heat, cold, and atmospheric changes.

THE SALMON.

The salmon is more properly speaking a sea fish, coming into the rivers to spawn; he is the largest, strongest, and most active and best flavoured fish that swims in our rivers. Salmon spawn about October, and have been known to attain to the weight of eighty pounds; they are only found in the largest rivers, and in the most deep and rapid parts; they are angled for with very strong tackle. The best baits for them are large worms and very large artificial flies. Owing to the impurities that run into many of our rivers from large towns, and from gas and other works, salmon have almost deserted many of our rivers, so that there is very little chance of any success to the angler as regards this fish.

THE TROUT.

The trout is one of the most beautiful and best flavoured of our fish; he has red and black spots on his sides, and is common to all parts of the country, in all rivers and brooks that are pure and have a rapid course, having a stony or gravelly bottom. They spawn in November and December, when they will go out of the larger rivers into the small brooks to spawn. At that time they are lean, lousy, and ill-flavoured. There are several varieties of trout: the large lake trout, the salmon trout, the common trout, *the char*, and the par or brandling of the

north of England and Scotland. There are various opinions respecting the different kinds: some are thought to be the young of salmon, and some to be of a mixed breed betwixt the salmon and the trout. Trout differ much according to the waters they are found in. Those in the barren, lingy, moor brooks, are generally lean and ill shaped, from the want of both food and water to increase their growth; while those in rivers that are deeper and running through cultivated grounds, and that are much overhung with trees where food is most abundant, are larger, of a brighter colour, and generally well fed. The trout is not gregarious, that is, they do not swim or go in shoals; he generally has his haunts or holds under stones, banks, or roots of trees in the water, and generally feeds in the stream and at the teemings in and out of deep places. Trout may be said to be in season in April and until October. The trout is a fish of prey, feeding at times upon a smaller fish, generally the minnow or the loach, &c. The trout is a greedy feeder, but very shy, therefore the angler must be very careful to keep out of sight. They will take almost any kind of insects that are found in the water and all kinds of flies, except the wasp, bee, &c.; but the best baits to angle with for them are middle sized red worms, wasp grubs maggots, cad and straw baits, drake grubs or insects, and also any other kinds of white or

green grubs, &c. They may also be taken well by dibbing on the top of the water, with almost any natural fly: the drake fly and the black wood fly are excellent for that purpose. They also afford the most excellent sport to the artificial fly fisher. (See dibbing and artificial fly fishing.) In fishing in the streams for trout at the bottom with the worm, the angler should not use a float on the line, because almost every place he tries will vary in depth, but the line should be well shotted, following the bait down the stream. In still ponds and lakes containing trout, a float may then be used. The lake and salmon trout sometimes attain to the weight of fifteen pounds, and the common trout to about four or five pounds.

THE GRAYLING.

The grayling is a handsome and well flavoured fish, of a more slender make than the trout, having a small tender mouth; they are of a silvery grey colour, whence probably their name. When taken fresh out of the water, grayling have a sweet smell, compared by some to the smell of thyme. The grayling is only found in some rivers containing trout also, such as the Dove, the Wye, and the Derwent in Derbyshire. They are said not to be found farther south than Hampshire, nor farther north than the river Wharfe in Yorkshire. Grayling spawn in April, and are best in season from July to January.

Grayling may be said to be gregarious; for they are inclined to keep company with each other. They mostly frequent the gentle streams at the head of deep places, and the teemings in and out of them, and are fond of deep pools, bridge and weir holes. He is a fish that swims much at mid water, and may be said to boil at the flies instead of rising at them. The best baits for grayling are wasp grubs, maggots, and ant eggs; they will also take the worm in thick water. In fishing for grayling, the angler should use fine tackle, with a small quill float lightly shotted. The grayling, next to the trout, affords the most sport to the artificial fly fisher. (See artificial fly fishing.) Grayling will attain to the weight of three or four pounds.

THE PIKE.

The pike is justly called the fresh water shark, he being so very voracious, and almost entirely feeding or preying upon other fish, even to devouring, as far as he is able, those of his own kind. The pike is a long fish for his size, with a very large, bony mouth, having very sharp teeth; the extremity of the mouth appearing somewhat in the form of a duck's beak. The pike's appearance, when in good condition, is of a mottled gold colour; they spawn in April, when they frequent the streams and shallows, among weeds, more at that time than at others. The pike is a fish common to almost all

lakes, rivers, deep drains, and canals, except mountain streams and trout brooks. The pike is a very solitary fish and generally frequents deep, still places, near beds of weeds, old fallen trees, deep pools, and bridge and weir holes. Pike have sometimes attained to the weight of fifty pounds; they are a very long-lived fish. The best baits for them are small trout, roach, dace, chub, bleak, and gudgeons: when these cannot be got, a perch or ruff, with the back fin cut off, may be used. Pike may be taken well in April and May, but are not then in season; the best time to angle for them is from August to December: they are then in good condition. In the summer time, early in the morning and late in the evening, is the best time to angle for them. Pike bite best in cool, gloomy and rather windy weather; and, contrary to most other fish, they often feed well in a cold east wind, the day being gloomy, and also before much rain and bad weather. How to angle for pike, see Pike Trowling and Live Bait Fishing. Pike are very good eating when in season.

THE PERCH.

The perch is a very bold and voracious fish, is rather hunch-backed, with hard dark coloured scales and red fins. Perch are gregarious, going in shoals where they are plentiful. They spawn in April and May, and are found in nearly all rivers, lakes,

canals, and ponds, They are a solid, good flavoured fish, and one that affords good sport, especially to the young angler, being so bold and not so very nice about the tackle fished with: the best baits for them are the brandling worm, the red worm, and the minnow, loach, or other very small fish. Perch do not rise at the fly, but will sometimes follow and snatch at them; their holds are generally under banks, among weeds and by the side of streams. They mostly bite best in a dullish day, with a little wind,—a clear, hot, still day is not good to angle for them. Use a small cork float, the line shotted to make it stand up, and fish near the bottom. If the bait is frequently moved about they will take it the sooner. Perch have a tender mouth, and should not be pulled out too rashly. They have been known to attain to the weight of four pounds. Proper size of hook on the list to angle with, No. 6 or 7. The angler will take more fish if he fishes with two rods, having the minnow and the worm on at the same time. (See Live Bait Fishing.)

THE CARP.

The carp is a fish with large scales and is somewhat shaped like the bream, but not so prominent in the lower part of the belly, has a longer back fin and smaller scales, is a thicker-made fish and the tail not so forked, and is of a darker yellow colour. They are

, so common in rivers as in still waters
d in ponds, lakes, and canals. Carp spawn
May and June, are gregarious, and are
id sometimes to attain to twenty pounds in
eight: the best baits for them are the red
/orm, wasp grub, maggot, and bread paste.
n fishing for carp, bait the ground, and fish
ıear the bottom, with three or four feet of
fine gut on the line, use a quill float, and be
careful to keep out of sight as much as possible, for this fish is remarkably shy.

THE TENCH.

The tench is a broad and thick-shaped fish, of a greenish olive colour, has very small scales, and is a more slimy fish than any other except the eel; they are mostly found in ponds and pits of water that are very weedy: they are but seldom caught in rivers and canals. Tench spawn in June, and seldom exceed five pounds in weight; the best baits for them are red worms, maggots, wasp grub, and bread paste. Use a fine gut line, a quill float shotted to make it cock, and fish close to the bottom, baiting the place with chewed bread, a few maggots, or pieces of worms, thrown in near the float. They bite best in summer, in cloudy, warm, close weather, and also early in the morning and late in the evening, and in damp, drizzling weather and may be angled for from May until September.

THE BARBEL.

The barbel derives its name from the four barbs or wattles hanging from his mouth; he is a tough or leather-mouthed fish, with largish scales. The back of the barbel is of an olive brownish colour, the belly silvery white. The body is long, thick, and full, when full grown, and in season are a handsome looking fish, but not very excellent for the table. Barbel spawn in April or May, are gregarious, some have been caught that have weighed nineteen pounds; they generally run of a larger size than any other fresh water fish angled for, except the pike; they delight to lie in deeps, in eddies, at the end of scowers, in mill pools, mill streams, the tails of mills, and under beds of weeds and banks, rooting up the gravel or sand with their noses. Barbel may be fished for from March till November, all day long; from March to June, fish for them in strong currents and on the scowers: they are often taken best late in the evening, and feed freely after rain, when the water is a little discoloured. The best baits for them are good sized red worms, maggots, and chandlers' graves. The tackle must be strong, with good gut at the bottom, a good sized quill float on the line. The bait must touch the bottom. Always bait the ground when fishing for barbel, (see Ground Baits.) They bite very sharp and sudden, therefore strike directly,

and let the fish run some distance before checking or turning him, then keep him from the weeds, taking him into deep water if you can and play him until he is weak enough to land: they are also often crafty and sulky and will lie still at the bottom when hooked; when that is the case keep as tight a line as you can until they move again. In barbel fishing, and likewise when angling for any other fish in large rivers or pieces of water, it is a good plan to have a lead bullet, made flat on each side, having a hole through for the line to pass, a large shot or knot on the line, about twelve inches from the hook, to stop it sliding down, yet leaving the line as a fish can draw it through, throwing the bait into the middle of the river without a float, and sticking the rod in the bank, drawing up any slack line, you will soon perceive when fish bite.

THE CHUB.

The chub is common to all rivers containing roach, dace, &c. The chub is not a good fish for the table, being coarse and bony, yet he is a good looking fish, and affords good sport to the angler. The chub has large scales, is of a thickish-make, with a largish head and mouth; he is a leather-mouth fish. They spawn in May or June, are gregarious, and some have been known to weigh eight pounds, they delight to be in deep shady *places* and about willows that grow in the

water; and in hot weather, they will bask or lie on the top of the water, or are swimming about on the top seeking for food; he is a very shy fish and soon disturbed. The best baits for them are wasp grubs, maggots, cheese paste, graves, and cad baits: in winter and early in spring they will take the worm; they will also take almost all kinds of grubs, and the pith of an ox's back bone is also a good bait; the brown clock is also a good bait to fish with in the deep streams. Chub may also be dibbed for with almost all kinds of flies (see Dibbing or Dodding.) In the summer months, they may be caught well with the artificial fly in very warm weather, two or three maggots being put on the end fly. They take the artificial fly well in the streams in June, July, and August. In fishing for chub at the bottom, bait the ground, and fish three or four inches from the bottom. Use a gut, bottom line, and a quill float.

THE BREAM.

The bream is a very bony and insipid fish, of little worth for the table, yet affords sport to the angler, they generally running larger than many other fish, and have been known to weigh as much as ten pounds. Bream are gregarious, and spawn in June; they generally frequent the broadest and deepest places in rivers and canals. The bream is a very broad and thin fish for his size, with

large scales, the head and mouth are small, the eye large, and the tail much forked; they are best in season in March and April and in autumn. The best baits for them are red worms, wasp grubs, maggots, and paste bait. The ground should always be baited, and, if convenient, the night before. They bite best in the morning and evening. They seldom bite in summer during the day, except it be dull and drizzly. Use a long gut bottom on the line, with a quill float, shotted to make it cock-up, and strike as soon as the float goes; and if it comes flat on the surface, strike then also, and let the bait rest upon the bottom. By having two rods you may take more fish.

THE ROACH.

The roach is a handsome fish, with a brilliant eye and light silvery scales and red fins and tail; he is a broadish fish, with a small mouth: they are common to almost all rivers, canals, ponds, and lakes. Roach spawn in May and June, are gregarious, and will sometimes attain to the weight of three pounds. They generally frequent still and deepish places, with a clayey or muddy bottom. The best baits for them are wasp grubs, maggots, and paste bait, made from the inside of a penny loaf or a french roll, chewed a little to make it moist and then worked up with clean hands until it is tough, putting a bit on the *hook* about the size of a pea. The hook

should be small—No. 1 or 2 in the list. Roach will also take the small red and brandling worm in a discoloured water; and very early in spring, they will also take the small house fly sunk at midwater, and are sometimes taken with the artificial fly, especially in hot weather when basking on the top of the water. The tackle for roach fishing should be very fine gut, three or four feet long at the bottom, or the same length of strong single hair, a light rod and a small long quill float, shotted to cock well up, and fish two inches from the bottom. Always bait the ground, The most convenient ground bait for this purpose is the brown bread bait. (See Ground Baits.) Keep now and then chewing a little and throwing it in the place you are fishing.

THE DACE.

The dace is similar in appearance to the chub, but is thinner in the make, and has a much smaller mouth. Dace spawn in May and June, are gregarious, and seldom weigh more than half a pound. They are mostly found in rivers and canals, delighting to be in shady and streamy places; they take the same bait at the bottom as the roach, and must be angled for in the same manner. Dace rise well at the fly during the summer and autumn months, and next to the grayling afford the most sport to the artificial fly fisher. The same flies as used for trout

are suitable for dace also; they may likewise be caught well by dibbing for them with the natural fly of almost any small kinds; the black or little house fly is very good for this purpose: they also take the small red and brandling worms in winter and early in spring. Dace are said to be in season from July to April.

THE BLEAK.

The bleak is a thin, neat-shaped fish, with a bluish back and silvery sides, and has a very small head and mouth: they are found in most rivers and canals containing chub, dace, and pike. Bleak spawn in May, are gregarious, and seldom exceed two ounces in weight. The best baits for them are small wasp grubs, maggots, and paste bait. Fish with fine gut or single hair tackle, and a very light quill float. Use the smallest of hooks, and fish at midwater; they will also rise well at the artificial fly, but the fly should be made on the smallest of hooks. Bleak will also take the small house fly well by dibbing for them, or it may be sunk or thrown out on the top of the water, a bit of quill being placed about six or eight inches from the hook, for they are a fish that swim much on the top of the water. The chief value of the bleak consists in the sport they afford to the young angler, where they are very numerous, and as a bait for pike and other large fish.

THE GUDGEON.

The gudgeon is a sweet, well flavoured little fish, and is found in most rivers and canals in company with other varieties, and they will live and thrive well in ponds through which a small rivulet of water passes. The gudgeon is a round made fish, with two barbs at his mouth; his sides are of a silvery brightness, and his belly of a pearly white. They spawn in May or June, and are said to spawn more than once in the year, and are gregarious, ofttimes swimming in large shoals, particularly in spawning time when they go into the stream: in winter, they retire into the depths. The best baits for them are small red and brandling worms; they will also take wasp grubs and maggots. Ordinary tackle may be used, with a cork or quill float, the line shotted, and fish near the bottom. It is also reckoned a good plan when fishing for gudgeons to rake or disturb the bottom where you are fishing to make them bite better. The gudgeon seldom exceeds two ounces in weight; they are reckoned one of the best baits for trowling, and live bait fishing for pike and large chub, and are a good bait for night lines also.

THE RUFF.

The ruff is probably so called from its rough, uncouth appearance, and the large prickly fin on his back; he is more like the perch than any other fish, but the fins are

not so red, and altogether he is of a more watery green colour; they are reckoned as good eating as the perch, and will frequent the same places, but are mostly found in the depths near the sides; they are common to most rivers and canals, in company with perch and other fish. The ruff spawns in April, they are gregarious, and the best baits for them are small red or brandling worms. Use the same tackle as for the perch. The ruff seldom exceeds two or three ounces in weight.

THE EEL.

The eel has quite a serpent form and motion, and many people have an aversion to them on that account; they are found in almost all waters, but mostly where there is good holds and plenty of sand and mud. Eels are very rich eating—too much so for some stomachs. They are supposed to spawn in April or May, and as great quantities of young ones are seen to ascend some rivers in spring, it is probable that they spawn principally at the mouth of rivers, where the mud and sand are most plentiful, or otherwise are originally natives, or hatched in the sea, and then ascend into the fresh waters and become naturalized in them. The eel is a voracious feeder and devours great quantities of small fish, and will feed upon any kind of animal garbage thrown into the water. Some eels are of a yellow, muddy look-

ing colour, but those with blue backs and white bellies are the best, and by some are called silver eels. They have their haunts under banks, stump of trees, among old walls in the water, and under stones and mud, where they will frequently lay with their heads out watching for their prey. The best baits for them are large red worms, wasp grubs, and maggots. Very strong gut and tackle are required to fish for eels, and fish at the bottom with either a quill or cork float. When a eel is hooked, care must be taken to keep him from getting, if possible, among weeds or rubbish, or under the banks; for if he does, and is any size, he will be almost sure to break either his hold or the tackle; therefore keep him in a clear place and land him soon as possible. There are two other ways to take eels in the day time, by sniggling and bobbing. To sniggle them, take a strong line, bait a hook with a large worm, and go where eels hide themselves in holes, the banks and betwixt stones in walls, &c., &c. Put the bait gently in the hole with a stick cleft on the hand to hold the line and bait; if the eel is there, he will bite. Bobbing is threading a large string of lob worms through twisted worsted with a needle, making it into links and fastening them to a line having a strong rod or hedge binding, and having a piece of lead on the line near the worms about half a pound in weight. When the eels tug, give them time; then

gently lift them out. This method is generally practised in muddy water and often in a boat. The best way to take eels is to set night lines with hooks on for them; for they always feed best in the night. The lines must be baited with large worms, or a small fish, frog, &c. The eel has been known to attain to more than twenty pounds in weight. There is also a very small kind of eel called the blind lamprey or seven eel, from its having seven spots on each side. They are always very small—not much longer than a good sized lob worm. They are frequently found on weirs in spring, sticking to the stones like a leech. Its haunts are generally in the mud, where it may sometimes be found by throwing it out with a spade. This small eel is an excellent bait for large eels on night lines. There are also several other varieties of lamprey eels found in various parts of the country: one that grows about a foot long and another that comes out of the sea, that has been caught upwards of three feet long.

THE BURBOT.

This is a very rare fish, and we cannot find that it has been before described by any other author, nor do we know of it being found in any other water than the little river Dearne, near the pretty village of Wath-upon-Dearne, about six miles from the town of Rotherham. This fish is shaped somewhat like the eel, but larger in the head and

ing a thicker and more taper body, without scales, and is of a slimy nature. The fin is also vertical, or running along the back and under the belly as on the eel; it is of a very dark colour, somewhat like the tench, but darker, and may be compared as being betwixt the tench, the eel, and the tadpole or frog bull-head. They are said to be very rich eating; it does not exceed one or two pounds in weight; it is very seldom caught with the angle, yet is said to take the worm.

THE FLOUNDER.

The flounder is rarely found except in those rivers and places having a near connexion with the sea and where the tide flows. He is a very broad and flat fish, with a dark brown back spotted with red spots, and has a white belly. The flounder, contrary to all other fresh water fish, swims with the flat side upwards, the same as the sea sole or skate. The flounder spawns in February or March, and is reckoned good eating. The best baits for them are small worms. A half pound fish is reckoned a good size. Ordinary tackle with a cork float may be used.

THE SMELT.

The smelt is in great estimation as a delicacy for the table. The form of the body is long and slender, the back a pale green, the the belly of a silver whiteness, and the fins of a yellowish white. Smelts are said to be

remarkable from their pleasant and peculiar smell. They spawn in April, and inhabit the fresh water from August to May. They are a sea fish, and are only found in rivers in which the tide flows near the sea, and in some of the docks. A shrimp is reckoned a good bait for them; they are generally angled for in deep places with several hooks on the line, tied on in different places, the lowest to touch the bottom. The line must be well shotted, and a largest float used. The smelt seldom exceeds seven or eight inches in length.

THE LOACH.

The loach has got no scales on his body which is round; he has several barbs or wattles hanging from his mouth like the barbel. Loaches are found in many small brooks, rivers, and runlets of water, in company with the bull-head and minnow. The loach is very sluggish in its movements, and is of a dull, muddy looking colour with rather a speckled appearance. They hide themselves under and lay beside the stones and on them; they feed on aquatic insects and worms, and may be caught with a bit of worm put on a very small hook, and put to them when seen; or a very small landing net may be put before them, and when touched at the tail with a stick they will oftentimes go into the net. The loach spawns *in spring*, and seldom exceeds four inches in

length. They are reckoned delicate eating, and are a good bait for all kinds of fish of prey, either used as a live bait or to set night lines with for eels, &c.

THE BULLHEAD.

The bullhead, so called from his large head, is generally found in the small brooks and runlets of water, in company with the loach and minnow. The bullhead has a remarkably large head with a roundish tapering body, and is of a dull, muddy looking appearance. They spawn in March or April, and seldom exceed three or four inches in length; they are generally found under or by the side of stones, and are also very sluggish in their movements, and may be caught in the same manner as the loach. Bullheads may also be used for baits on night lines.

THE MINNOW.

The minnow is a beautiful little fish, and is also very active in its movements; it abounds most in small brooks and pools of water having a small runlet going through them. They are also frequently found in pools and shallow places in and adjoining to rivers. The minnow spawns in June, is gregarious, and seldom exceeds three inches in length; they afford good sport to the boy angler, and the best baits for them are small bits of small worms or maggots, put upon the

smallest of hooks tied on to a single hair and shotted with one small shot, and a very small quill float. The minnow will also rise at the fly, and may be taken with the small house fly, either on the top or sunk at midwater. The minnow is most valued by the angler for its being one of the best baits for catching trout, perch, chub, and small pike, either with the dead or living bait. (See minnow trowling and live bait fishing.)

THE STICKLEBACK.

This is the smallest of our English fishes, and receives its name from the sharp spines or prickles on its back They are mostly found in small ditches and very small ponds. They spawn in April or May, and are said to breed in such quantities on the coast of Lincolnshire as sometimes to be used for manure. They seldom exceed two and a half inches in length, and may be used as a bait for perch, for want of a minnow, by cutting off the prickles before using: the best bait for them is a bit of red worm put on to the smallest hook.

The weight here given of the larger kinds of fish may be said to be the extreme; they seldom do arrive at that size. For a trout, grayling, perch, or roach, a pound; bream and eels, two pounds; chub and barbel, three or four pounds; and pike six or eight pounds, may be considered large fish for the *angler to take*; for in many cases, hundreds

smaller will be caught to one of the size here specified. Many persons in looking at the spawn or roan of fish might wonder they are not in greater numbers; for in some kinds, they are capable of reproducing their species by millions from one parent fish annually. The reasons are obvious. When fish go to spawn, they frequent the shoals and their streams to deposit their eggs. Great numbers are then took by netting, spearing, &c., and many fish feed upon the spawn of fish, so do many insects that live in the water; and many fish feed upon small fish, and also many kinds of both animals and birds feed much on fish: the elements themselves are often destructive of much spawn and fish, both being destroyed in great floods, or at other times by being left exposed in dry seasons to the weather. This leads to a suggestion that if, by some means or another, the spawn of some of the principal kinds of fish could be procured, or some of the old fish ready for spawning were taken and put into some proper receptacle prepared for them to deposit their spawn, and when it was hatched kept a short time and fed until the young fish were fit to turn into the waters, they might then be produced in great numbers. This plan we do not think impracticable.

We are here led to say a little on the keeping and preserving of fish in store ponds or preserves, such as all artificial pieces of wa-

ter, ponds, reservoirs, lakes, &c., that have no direct communication with any rivers; and as pike, perch, trout, carp, and tench, are the principal kinds worth preserving, and as pike, perch, and trout, are fish of prey, and if put by themselves into water, for want of sufficient food, if existing at all, would become lean and ill-flavoured; and as hunger has no law of limitation but its satisfaction, it is necessary for their preservation that their want should be met. For as even civilized man has been driven at times to the revolting necessity of drawing lots as to who should be slain to keep the rest alive, much more these fish would devour one another even of their own kinds, as far as they were able, until only a few of the largest remained; therefore those waters intended to be stocked with fish of prey should always have introduced into them breeds of the smaller kinds of fish proper for food for the large or store fish. Suppose pike and perch are for store fish, then the roach, dace, bleak, gudgeon, loach, bullhead, and minnow, should be put into the ponds, reservoirs, or lakes, and they should always be large waters that are intended for pike. Those ponds intended for trout or perch alone should have put into them the gudgeon, loach, bullhead, and minnow. We do not say that all these fish, intended for food, will breed and thrive well in still waters, but they may be tried The trout, *roach, gudgeon*, loach, and minnow, are the

likeliest, particularly the gudgeon. As trout cannot breed in still waters, the preserve would have to be supplied with small stock fish from the brooks and rivers by means of flood nets, lading, and groping. All preserves for pike, perch, and trout, should have a small brook or runlet of pure water running into them, and should have a grate fixed at the entrance of the brook to keep the fish from going out of the preserve, which should also be staked round the edges, or have roots of trees thrown into them, to prevent poachers netting them. Carp and tench will breed and thrive well in any flat weedy pond, made of sufficient size and depth, and not being fish of prey, should always be kept by themselves.

It is not to be expected that we should describe all the rivers or best places to angle in. That does not come within the scope of any general angling book; for every locality has its peculiar waters, but we will remark that all rivers or waters that are pure or are fed by the pure springs, or the rain and drainage water from the lands, if they are large and deep enough, will always contain fish more or less. This depends greatly how much they are netted and angled, but all those rivers and waters containing much yellow ochre water, or mineral water pumped out of deep mines, or that are strongly impregnated with dye and gas water, the refuse from chemical works, or with the common sewer water from

large manufacturing towns, cannot be expected to contain much fish; for all these things are poisonous and destructive to them. If the water in any place looks clean and is fit to drink, and it and the bottom seem of their natural colour, and the vegetation growing in the water seems vigorous and healthy, all is right as regards the healthiness of the water; but if it and the bottom look yellow, or have a blue appearance, or have a scum of any kind floating on the top, and the bottom looks nasty, or has a blobby or unnatural appearance, little or no fish can be expected in such places. Much good information may always be got from other anglers as to the best places to fish in.

A DESCRIPTION OF

BAITS USED IN BOTTOM FISHING,

AND WHERE FOUND.

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WORMS.

The worm is one of the most natural and universal of all baits, and will take all kinds of fish, more or less, at suitable times and seasons.

THE LOB OR DEW WORM

Is in season from April to October. This is the largest of all worms, and is found by taking a lantern and candle to grass plots and old pastures in an evening. There are several sorts: those with a broad, flat tail are the best. In seeking them, go very gently; for the least shaking of the ground will make them enter their holes directly, they frequently being half in and half out. This worm is mostly used for large fish, and to set night lines with.

THE RED WORM.

This worm is of a bright red and is found in old manure heaps, in decayed tanners

bark, on the borders of old drains, under de cayed wood and garden rubbish. This worr is the most esteemed of all worms for th angler's use.

THE BRANDLING.

This is a red worm, with yellow rings o: the body and a yellow tail, and has a stron peculiar smell with it. It is mostly found i: old dung hills, particularly those containin hogs' or cows' dung, and also in tanners' ol bark. This worm is generally smaller tha: the red worm, and is an excellent bait fo many kinds of fish.

There is also the marsh worm found i: marshy places, being a pale worm with broad, flat tail, and also the seg worm, foun in hollow parts of water segs near the root: having a black head and a whitish body and also the black headed red worm, foun under cow or horse dung in the pastur fields. These worms may occasionally b used when the red and brandling worms ar not to be got.

TO SCOUR AND PRESERVE WORMS.

Procure a quantity of moss, generally foun in steep woody places, or on very steep bank or hedge sides, having a northern aspec Wash the earthy matter out and rinse it a dry as you can, then lighten it out agai put it into a large jar or pot, put the worm *in, and tie* a paper over the top, prickin

small holes in with a pin for air. They will be ready for use in two or three days. To keep them forward, the moss should be changed every four days, throwing away any dead or sickly looking worms: keep them in a cool place in summer and free from frost in winter.

THE MAGGOT OR GENTLE.

The maggot is also one of the best and most general baits, and will almost take any kinds of fresh water fish, except salmon, pike, and char. The perch, carp, tench, bream, and gudgeon will sometimes take the maggot, but not so well as the red worm; but for roach, chub, dace, barbel, bleak, trout, and grayling it is a very killing bait, and most suitable for low and clear water, and the later in the season the better will be the success with the maggot; and from September to Christmas, no other bait need be used for grayling. Maggots can seldom be procured before May or June, but when it is once in there is not a better or a more easily procured live bait; those found in butchers' or chandlers' suit are generally the best, being fat and white, but being bred in any other kind of substance will do. They are scowered or cleansed by putting them into bran. Maggots are a very tough bait, and capital to put on the end fly when fishing for chub, dace, and grayling with the artificial fly.

MAGGOTS.

To breed and preserve Maggots. Take a piece of bullock's liver, gash it with a knife, hang it up in a shady place open to the air, putting a small tub or large pot under, having some bran and a little sand mixed. The flies will blow the liver, and when the maggots are full grown they will drop into the tub and cleanse themselves and be ready for use when wanted. Any fly-blown bits of meat with a little moist offal added, and put into a pot and covered up, will answer the same purpose, scoured in bran before using them. To preserve maggots a long time keep them in a very cool place: to prevent them getting into the chrysalis state, a cool, dry cellar is suitable; or dig a hole in a dry, shady place in the garden, put them in, covering them well over, and by these means any fly-blown substance will frequently preserve maggots until the following spring.

THE WASP GRUB.

This bait, during the time it is in, and while they are fresh and alive, is, we think, superior to any other bottom bait for roach, dace, chub, bleak, trout, grayling, and eels. In using the wasp grub care must be taken to strike directly the bait is taken, for it is the tenderest of all baits. Those wasp cakes where the grubs are covered over are frequently baked a little in a very gentle oven

to stiffen them and to make them keep longer, but fish always take the live and unbaked grub best. Loose grubs may be kept in bran, the others are best to remain in the cake, and kept in a dry place. Care is to be taken when out fishing with the wasp grub that they do not get tumbled about or crushed. The wasp grub comes in about July and continues until October. In some hot, dry seasons, they are very plentiful; at other times, and in wet and cold seasons, they are very scarce.

Wasp nests may be taken by putting a gunpowder squib or serpent into the nest, clapping a sod on the hole, and in a few minutes after the serpent has gone off, digging it up. Care should be taken, if in the day time, not to fight the flying wasps, for if you do it will vex and make them sting the more. In taking wasps' nests in the day time it is well to have the exposed parts of the person covered or protected by some crape or muslin substance. The best time for taking wasps' nests is after dark, when they are all in the nest, and may then be smothered altogether. Of course, a lantern and candle, spade, and basket will be required. In digging up a nest mind you do not send the spade into the nest and crush the combs, which should be separated with a table-knife, and the wasps brushed off them with a little bough before putting into the basket. Wasp nests are generally found on dry hedge and bank

sides, in dry corn and pasture fields, and wild, dry, scrubby places.

THE DOCK GRUB.

This is a large, white grub, found in old roots of the common field or garden do and is to be got from April to June. T grub is a killing bait for trout. It is bu very scarce bait to be got in any quantity

THE OAK GRUB

Is a small, green caterpillar, to be got June, July, and August, by shaking branches of an oak tree over a cloth. Tl may be kept in a tin box, with oak leav This is a very good bait for trout.

THE ASH GRUB

Is found under the ash, oak, and beech tre when peeled and they have lain some ti and also in the hollow of those trees wl rotten. This is an excellent bait for tr and grayling, to be used from Michaelmas June. It is a very tender bait requir care.

COW DUNG OR CLAP BAIT.

Found in old pastures, under old co dung, from April to Michaelmas. It is lon than a maggot, having a reddish head; i good bait for trout, either at the top or b *tom of the* water. These baits may be k

in a tin box, with a little of the earth from which they were taken.

BOBS.

There are found by following the plough in spring and autumn; they are more than twice the size of the maggot, with red heads. A good bait for trout and chub from November till April. Care is required in baiting the hook, for they are very soft inside.

DRAKE GRUB.

This insect is found among the sand and mud in small brooks and rivers; and in the mud by the side of canals in March and April. This creeping insect turns into the May fly. It is procured by dragging the mud and sand out on the side with a cow-rake, They may be kept in a bag with wet moss and sand. This is a good bait, especially for trout.

THE GRASSHOPPER.

Grasshoppers are found in August and September, in dry grassy pastures and on dry southern hill sides. A good bait for dibbing with for chub and trout. To be kept in a horn, with bits of grass.

THE BLACK OR WOOD FLY

Is found in great quantities in woods and very woody, shady places; it is like the common house fly, only much larger. In warm

weather they will soon come to any strong smelling dung or such substance, and may be caught by having a tunnel fixed on a long stick with the mouth downwards. A large vial bottle being put on the tube, clap the tunnel over them, and they will ascend up into the bottle, and may then be shaken into a horn. Too many should not be crowded together or they will become sticky and spoil. Small bits of leaves may be put to them, and the horn should have very small air holes bored in at the sides. They may be got from June to October. This is a capital bait for dodding for trout, chub, and dace, and it will frequently be taken very well sunk at midwater, a little bit of cork, about the size of a horse bean, put on the line, and the hook weighted on the shank with a bit of tea lead wrapped round to make the fly sink.

THE HOUSE FLY.

This is the common small fly found in houses, and is a very good bait for dace, bleak, roach, and small chub. A very small hook and fine tackle should be used for this fly.

THE BROWN CLOCK.

This is a very large brown beetle, and is found under the leaves of oak trees in the day time, or flying about at night, in June and July. It is an excellent bait for a large *chub,* either by dibbing or to be fished with

in the deep streams. They may be kept in a box with oak leaves.

ANT EGGS

Are taken from the nests of the large ants found in woods and rough woody places. A killing bait for trout and grayling, at the head of deep places or long still deeps, in a discoloured and fresh water, using a small float and now and then throwing in a few ant eggs. They may be kept in a bag with some of the nest from which they were taken.

SALMON ROE.

This is considered a very good bait for trout and eels, and may be procured at the fish dealers or at the fishing tackle shops. To preserve salmon spawn, wash it, then boil it quarter of an hour, pick out the skins, add some salt, a very little saltpetre, then mix altogether in a mortar, and put it into pots as used in potting beef, covering it over with melted mutton suet. Covered well over and tied up it will keep a year or more, and be ready at any time.

CHEESE BAIT.

Newly-made cheese is a good bait for chub and barbel. If new cannot be got, old cheese, soaked two or three days in wet cloths, will answer the same purpose.

PASTES.

The inside of a penny loaf or French roll, or very fine white bread, first moistened a little and then worked up with very clean hands, until it becomes a tough compact paste. A very good bait for roach, dace, carp, tench, and bream, in still waters and ponds.

Old cheese, grated and worked up into a paste, with a little fresh sweet butter, and coloured with a little saffron, is a capital bait for large chub. To be put on the hook about the size of a hazel nut. Pastes may be coloured with a little vermillion or turmeric, to suit the fancy.

GRAINS, WHEAT, AND MALT.

Grains are a good bait for roach and dace. In fishing with them pick out the nicest, unbroken grains to put on the hook, removing a portion of the husk, and keep throwing grains into the water to bait the ground. Wheat and malt creed or boiled in milk till soft are an excellent bait at all seasons for roach and dace. Before baiting the hook remove some of the outer husk, and always have your baits fresh and sweet.

GROUND BAITS AND BAITING.

Ground baits are for throwing into the water to bait the ground where you intend *to fish,* or are fishing, in order to entice the

fish about the place and keep them there. More success will always attend the angler when the ground is baited, particularly in large rivers and large pieces of water. Brewers' grains are a good ground bait for many kinds of fish. Bread and bran, well mixed together, the bread being well soaked first and then made up into balls, having a small stone put into the middle to make them sink, is a good ground bait. Maggots or chopped worms mixed up with clay in balls and thrown in the water, is a good ground bait, especially when fishing with the worm and maggot in the streams; but one of the most convenient and comfortable ground baits, to be carried about, is the brown bread bait, made of bran, and a sufficient quantity of flour put to it to make it up into bread or paste before baking. It will keep sweet for a fortnight when kept in a cool, dry cellar. The best way of using this ground bait is to keep chewing a little now and then and throwing it into the water where you are fishing.

Ground baits should always be fresh and sweet, and also all other kinds of baits, for fish do not like any thing that is old, sour, or stale; and in order to prove the advantages of ground baiting, if two persons were fishing only a few yards from each other, both having the same kind of tackle and baits, we will venture to say, if one baited

the ground and the other did not, he th baited the ground would catch double t quantity of fish more than the other not ba ing the ground.

DIBBING OR DODDING.

This is a method of taking fish that ri at the fly, such as trout, dace, and chub, l dodding with a natural fly—that is by kee ing the fly or bait in continual gentle moti on the top of the water. In this kind fishing care must be taken to be very sti and keep out of the sight of the fish as mu as possible. A long, light rod is the best f dodding; about three feet of gut should l on the line, very fine at the hook. Any kir of flies or green grub that are found on near the water may be used for doddin The black wood fly is an excellent fly f this purpose. Dodding is best practiced i very warm weather, and under the shade an by the side of trees and bushes, and is a ve successful way of taking trout at those time The fly may also be thrown at any fish th have arisen near, or it may be thrown in the stream and allowed to sail down on th top. The drake fly, when in season, is a excellent fly for this method of fishin Drake flies may be caught with a landin net, and are generally kept in a very sma willow basket, having a cover and hung t the side.

LIVE BAIT FISHING.

This method is fishing with a small live fish as a bait for a larger fish, such as pike, chub, trout, and perch. The minnow is the best for perch, trout, and chub, and for pike, a gudgeon; but any other kinds of small fish may be used, especially for pike, except it be the perch, ruff, or stickleback. In baiting the hook, put it through just below the back fin of the bait, or through the lips at the mouth. Very strong gut must be used for the minnow, and gimp or strong double twisted gut for the gudgeon or pike bait. The line must be well weighted to keep the bait down, and the float a large one of cork, so as the bait cannot take it down. It is well to have another cork about twelve or fifteen inches from the other, to keep the line up so that the bait may not get entangled in it. When the minnow is taken, give a little time, then strike. When the pike bait is taken, let him go to his hold, and pouch before striking, unless the spring snap is used, (see pike trowling;) then let him go a little and then strike. To bait the spring snap hook, put the small hook under the skin at the side, and bring it out at the back fin, letting the large hooks remain under the belly. In fishing with the live bait, the angler keeps trying the most likely places, putting the bait in very easy, and letting it stop some time before he tries another place. Of course, he

must have a bait can for his live baits, a
if he has a long distance to remove from
place to another when fishing, he must
the baited hook in the bait can to keep
bait alive. It is also a good plan, when
tom fishing, to have a live bait rod set
some distance from where you are fishi
for if you take a pike by that means, he n
be worth all the other fish you may ca
put together.

FISHING RODS.

Fishing rods are made of different
terns to suit many tastes and purposes: so
are in two parts, others in three, four, fi
or even more parts, in order to render th
snug and portable; but the more parts a
contains, the worse it is for use, the hea
it will be, liable to be less firm, more
and unequal in its spring, and also m
liable to accidents from breaking, &c.
main beauties in a good rod are its li
ness, its firmness, and its elasticity, or re
larity of spring; therefore the rod in
parts is the best for use to those that
very near the river, but is inconvenient
carriage for long distances, therefore one
three parts is the best taking all things i
consideration. A rod is improved by be
put together in the top parts by a long
splice in the wood instead of a hoop,
splice being rubbed with wax to make th
stick, then wrapped firmly with waxed thr

before using. We would recommend particularly those intended for throwing the artificial fly to have a splice in the top part. The best general rod for angling is one from eleven to sixteen feet long, in three or four parts, the bottom being bored hollow to contain two or three spare tops: a minnow top, a worm top, and a very fine top for fine fishing, the bottom part having a spike to stick in the ground, and the rod being ringed for the line. The rods for the different kinds of fishing are described in their proper places.

HOW TO MAKE FISHING RODS.

Some of the best woods for the making of fishing rods are, for the bottom parts, ash, American birch, and bay wood, or even good straight-grained deal will do if not to be bored; for the middle parts, well grown heart of hickory, ash, or American birch; and for the top parts, lancewood or logwood. Logwood is excellent for top parts when it can be got straight-grained. It has good spring and will stand its place, and can be worked very fine. Bamboo cane also makes very good tops. Care should be taken that the wood, intended for fishing rods, is straight-grained free from knots. It is often difficult in some woods to get it of sufficient length thus free for whole parts; in that case, they may be spliced and glued together, and the splices afterwards wrapped close over with well-waxed strong silk before varnishing.

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First, make the parts square with a plane, then octagon, and then reduce them further with raps and files to little more than the thickness required, leaving the bottom part of the rod so thick as to have firm handle hold, or about one and a quarter inch thick. Fit the hoops on very true and tight, daubing the end of the part over with varnish before driving on the hoop; then reduce the parts down to their proper thickness, care being taken to keep them round and regular. The top part of a fly rod should be about the thickness of the top part of a full-grown wheaten straw; the worm or top rod to be of the middle, and the minnow top to be the size of the bottom of the straw. Try the rod by putting it together and handling it, to see if it is right or wants altering any before rubbing it smooth with glass paper. Rods may be stained a dark colour by a strong infusion of logwood chips, with a very little alum in; or for a yellow use turmeric, putting the liquid on with a brush until the colour required is attained; observe if there is a splice to be separated, do it before colouring by soaking the place with warm wet cloths, and afterwards moving or bending the parts about until it separates. When the rod is coloured and dry, rub the parts well with a cloth and a little boiled linseed oil; then wrap the splices if there are any, and put on about a dozen small rings for the line *to go* through, in one straight line from end

to end, not exactly at equal distances, but closer together towards the small end, and a fast ring turned down at the end; and finally the rod must be varnished once or twice over with copal or some other good varnish. If a person is not a good and neat mechanic, we would advise him to buy a rod rather than attempt to make one. If the parts of a fishing rod gets fast in the parts with wet or dampness, hold the fast part over the flame of a candle, turning it round, then pull them asunder by pulling and turning; and if a rod gets broken by accident when fishing, it may be spliced with a knife and then wrapped with waxed thread, or if broken near a hoop, then cut a bit of stick the thickness of the part broken about the length of the hoop, the three will then form a triangle, and may be tied firmly together to fish, the rod being properly repaired at a more convenient time.

FISHING LINES.

Fishing lines are made of hair or silk, and sometimes of silk and hair mixed. Silk lines are very fine and neat looking to the eye, but those made of all hair are decidedly the best for use, they not holding so much water as the silk, nor so liable to kink in the using. The line for regular bottom fishing, &c., should be from twelve to twenty yards long, and of about twelve hairs in thickness; but the line for throwing the artificial fly should

be spun taper, having six hairs at the small end, and increasing regularly like a whip lash up to twenty hairs or more in ten yards, then reducing down rather suddenly to twelve or nine hairs in the next ten yards; or the line may be spun regularly tapering, making both ends alike, so that if a line should get worn or broken in the small part, it may be turned on the reel. The advantages of taper lines are that they throw so much better and easier.

HOW TO MAKE FISHING LINES.

Fishing lines may be spun by means of three round goose quills, all of one thickness, or small brass tubes will answer the same purpose, the inner edges of them being rounded smoothly off, so as not to cut the hairs, each tube having a long cork peg fitted to it with longish ends to pull it out by. In spinning, these tubes are turned by the thumb and fingers, turning them all at one speed. The hair in commencing must be all of different lengths, so that the ends may come regularly, and the hairs to feed with must be all of one length. You must keep turning and pulling it out bit by bit and twisting it. Put another hair in when the end of one is only an inch long from the tube; put the hair in an inch past the end of the tube, holding the end until it is twisted in with the other, and so on till the *line is* spun, and then dress all the ends off

close with a pair of scissors. The best lines are made by machines made for that purpose, where the tubes are fixed in a triangular form and turned at one regular speed by a handle. This machine is fixed in a frame of wood and fastened to the edge of a table, the line going over a pulley opposite the tubes, and hanging down from the table with a weight or large bobbin, both to keep it straight and wrap the line. By the above means, lines that have been broken or worn at the ends may be lengthened with new ends by unraffling the end and putting it in the machine again. Lines and other fishing tackle should always be put by dry or they will rot or rust.

FISH HOOKS.

There are various kinds or makes of fish hooks—the Kendal, the Kirby, the Limerick, &c. There are no doubt good ones of all the kinds in the best qualities, but those made of fine wire and twisted in the bend are the best. Hooks may be tested by giving them sufficient stress before dubbing. The hook, particularly for artificial fly fishing, should always be of the best quality and fine in the wire. In tying on hooks, let the silk be very fine, wax it double with a small bit of wax, or it may break, then open it out. In tying on a hook, first bite the end of the gut betwixt the teeth to prevent it drawing, then give the silk a round on the top of the shank of the hook, then put the gut on the inner

side, wrapping it down to near the bend; c
the end of the gut if required, then go a lit
lower, then a round or two back again, th
fasten the end by looping and drawing clo
In tying a bristle on the hook to keep a b
from working down or off the hook, put t
bristle to, and when you have gone abo
three-sixteenths of an inch from the top, c
the bristle off nearly as short as the hook.

SILK WORM GUT.

This is the gut of the silk worm, dra
out of the body of the insect before spinni
its silk. This article is the best of all othe
for the angler's purpose, it being both stro
and fine to tie on hooks, and for the botto
of lines. Gut that is clear, round, even, a
free from knobs or blotches, is the best. B
fore tying gut together, it always should
softened by putting it in water or in t
mouth for a short time, in order that it m
tie well and close in the knots. In tying g
put the ends crossways as short as you a
enabled to tie, then put one gut and e
through twice and draw it quite close, ma
ing what is called a water knot, and cut t
ends off close. When gut gets frizzy
towey in the using, cleanse it by drawing
through a bit of India rubber. There a
several other substances sold to be used i
stead of silk worm gut, that may occasional
suit the bottom fisher, but are not suitable
all for the fly fisher.

FISHING REELS.

Those reels that are simple in their construction and firmly put together are the best, and should be rather narrow for the diameter; for then the line wraps up so much better. Skinner's patent (Sheffield) is one of the best we have seen for the fly fisher. The Nottingham wooden reels are the best for the pike fisher. Those reels with complicated and multiplying machinery are generally heavy and subject to be out of order. In buying a reel, let it be sufficiently large to comfortably hold the intended length of line. A reel may be fastened on the rod by means of hoops, or it may be tied on with tape, twine, or strap.

FISHING FLOATS.

Floats are made of cork or quill, or quill and cork combined. Those of cork are best adapted for the worm and live bait fishing, but for all kinds of light and fine fishing, long quill floats made to cock up well when the line is shotted, are the best. Floats will act well by putting the quill hoop on the ring end of the float. Small porcupine quill floats are very good made in this manner.

FISHING BASKETS.

Those baskets made of split willow are the neatest and most easy when made hollow in the back, bellied out in front, and slanting

on the lid. Those made of whole willow are more durable and much cheaper. The strap to the basket should be rather wide and sufficiently long to make the basket sit easy in the carrying.

BAIT CANS.

Bait cans that are made widest at the bottom and having the lid sunk to keep the splash water in, are the best. The size of a bait can must be regulated according to the quantity of baits intended for it, and the distance it may have to be carried. A very small bait can, rather long and of an oval form, made to go into the pocket or basket, having a wire handle, is very handy for the bottom and live bait fisher,—a string being put to the handle to let it down in the water to keep the baits fresh. In carrying baits a long way, the water should be frequently changed to keep them alive.

FISHING TACKLE BOOKS.

Tackle books are made of leather or parchment: one with a parchment inside and a leather outside, about seven inches long and four wide, containing five or six pockets, makes a good tackle book, and should be furnished with several floats, dubbed and loose hooks of various useful sizes, gut bottoms for lines, a small quantity of loose gut, fine silk and thread, some wax betwixt a bit of leather, split shot of various sizes in a little parch-

ment pocket, &c., &c., all neatly put in parchment or writing paper wrappers, having inscribed on each what they contain; for the boy angler any small pocket book will do for his tackle.

The artificial fly fisher's tackle book should have one or two loose parchment books, containing about four leaves each and having fine flannel pasted on the inner or one side of each leaf to attach the flies to, and lashes having flies on should be kept in separate wrappers of parchment or writing paper, to keep them from getting entangled. Also papers containing ready made lashes, gut, dubbed worm and other hooks, one or two floats, wax, thread, silk, needles, shot, &c., &c. A tradesman's morocco bill book the proper size, with several pockets, makes a very neat tackle book, only requiring a tape attaching to tie it up by.

THE LANDING NET.

The landing net is very useful where the banks are high, or are much encumbered with bushes and weeds, and for landing fish at all times: many good fish are often lost for want of a landing net, in particular when fishing with very fine tackle. A good, light, cheap landing net may be made by bending a piece of cane in a round form, attaching to it a stock or handle; others are made more portable for carriage, by having the hoop made of wire with joints to fold up by, and

made to fit on the stock by means of a screw or hoop. A hoop about twelve inches diameter makes a very good sized net. The landing net stock is best made of ash, about five feet long, having a spike at the end with a small hook attached to hook or pull boughs by when the tackle is fast to them the stock may be jointed with a hoop to suit the pa[illegible] A handy little net is made by [illegible]ire hoop, about nine inches w[illegible] joint on the top side and the [illegible]ving a screw, with a square s[illegible]part and a square ring on the ot[illegible] on to it.

THE GAFF.

The gaff is a very large fish hook, made to screw into a stock or handle to land fish with, and is best adapted for landing a pike or salmon by sticking the hook into the fish.

THE CLEARING RING.

The clearing ring is for the purpose of disengaging the hook when fast at the bottom. It is a ring of metal, rather heavy, and about one and a half inches diameter inside, having a joint in the middle to open it in order to put it on the rod or line, having attached to it about fifteen yards of small whipcord, the other end of the cord being fastened to a bit of thin wood, hollowed out to wrap the cord on. When a hook is fast at the bottom *the clearing ring* is put on the rod, and

ting it slip down the line to the hook, taking the cord with it. If that does not liberate the hook, hold the line one way and pull or check the cord the other.

THE DISGORGER

Is a bit of strong wire, about six inches long, flattened at one end and having a nick in it to get the hook out of the mouth of a fish.

MINNOW TROWLING.

Minnow trowling is fishing with a dead minnow as a bait, and throwing it across the streams into turn holes and other likely places for fish, working it against the stream to make the bait spin. This is a good method for taking trout, particularly after a flood, when the water is clearing or is rather discoloured. It may be practiced at other times in clear water, for taking perch, chub, and small pike. A long bamboo cane rod, fifteen or eighteen feet long, with a stiffish top, is very suitable for minnow trowling. The line should be pretty strong, having at the end about four or five feet of very strong gut, having on it two very small minnow swivels, one in the middle of the gut the other at the end—the one at the end to have a spring loop to slip the bait gut loop over.

There are many methods of baiting the minnow, according to fancy; one way is by having three hooks (about No. 6) tied or *soldered together* in a triangular form, tied

on the gut and by means of a baiting needle, which is a small bit of wire pointed at one end, and having a very small loop on the other, to hang on the loop at the end of the bait hook gut; then by putting the needle in at the vent of the bait, and drawing it close up; then having another single hook, with a small loop of gut tied on, the loop is to be slipped down the bait gut, and put through the lips of the bait, and then the loop is tied fast to the bait with waxed silk. Another method of baiting is by having three double hooks tied or soldered back to back at equal distances, so that one will go through the lips of the minnow, another in at the back, and the other in near the tail. A small bit of long round lead may be put into the mouth of the bait to give it more weight. In fishing, when you feel a bite, strike directly. The middle-sized minnows are the best, and may be kept in a tin box, with some bran.

PIKE TROWLING OR FISHING.

Trowling for pike is a line baited with a dead fish or bait and throwing it continually into the water, in the most likely places for pike, letting it sink a little, then drawing it a little, then letting it sink again, and so on, until it gets near the side ready for another cast of the line. A very strong and long rod is required for pike trowling, about fifteen or eighteen feet long; and a reel, containing

thirty or forty yards of pike line, or very small silk or hempen cord, having a gimp or strong twisted gut bottom; two box swivels, one at the end having a spring loop to hang the bait noose on, the other swivel without a spring, to be put about a yard higher up the line: the two swivels are to make the bait spin more freely. Some persons in trowling use a short rod, about ten or twelve feet long, and swing the bait out, making it take out the bait after it, and then keep drawing it in again with the hand ready for another cast of the bait. The same methods as are used for baiting the minnow will also do for the pike bait, only the hooks used must be considerably larger, No. 10, or larger for large baits. When a pike takes these hooks (which may be called snap hooks) let him run a little and then strike as much the contrary way as you can. There is also another method, called the gorge hook, being either a single or a double hook fixed on twisted brass wire, and leaded in the shank about an inch and a half from the hook, to which is attached the gimp or gut. In baiting this hook use a baiting needle, six or seven inches long, putting it in at the mouth of the bait and drawing the hooks close; if double hooks, turn the points next the eyes of the bait; if a single hook, next the belly; and tie the tail of the bait fast to the arming wire neatly with thread. In fishing with the gorge hook, let the pike run to his hold when you have a

bite, and let him pouch the bait, giving him from five to ten minutes before striking him; if he goes off again sooner, then wind up the slack line and strike him. The best sized baits for trowling are those from two to four ounces, and the best kinds are trout, roach, dace, chub, gudgeon, and bleak. Keep the baits in a box with some bran, to both pack and dry up the moisture. A bag with strap is generally used to put pike in. (For more particulars, refer to the description of "The Pike.")

ARTIFICIAL FLY FISHING.

Artificial fly fishing, as its name implies, is a deceptive art. It is the most pleasant, gentlemanly, and scientific method of taking such fish as rise at the fly; it embraces the partaking of much exercise, and greater change and diversity of scenery, and at the proper season is also the most successful way of taking certain kinds of fish; yet, at the same time, it requires greater nicety in the tackle and more practice and experience to arrive at tolerable perfection. Another advantage attendant on fly fishing is, when the angler has got a sufficient stock of tackle, and in proper order, there is no seeking or preparation of baits. The fly fisher is ready for an excursion with very little warning at any time. The most suitable rod for a fly fisher—we mean a one-handed rod—is one from eleven to thirteen feet long. This de-

pends on the size of the river or water to be fished in; if the river is small, the eleven feet, if large, the thirteen feet rod: but for very large rivers and waters many use rods of fifteen or twenty feet, and throw with both hands, these may, therefore, be called double handed rods. The line, reel, landing net, and fishing basket suitable for the artificial fly fisher will be found under their proper heads in the book.

THE FLY LASH.

The fly lash, to attach the flies to, should be from eight to twelve feet long, and made of good, even, round gut, very strong at the top and tapering regularly into very fine at the end, having three or four artificial flies fixed on to it, the end fly being tied on to a length of very fine gut, the other flies being put about two feet asunder, and hanging from two to three inches from the lash, the top fly gut being the longest. There are two ways of fastening the fly on the lash—one is to make a loop on the lash where the fly is intended to be, and also making a knot on the fly gut, putting it in the loop, and then drawing it close and giving the fly gut another loop over the lash and drawing it close. This may be called the fast or permanent method. Another way is to make a running knot on the lash, and having a knot on the fly gut, putting it in the running knot and drawing it close. The flies may then be

changed by pulling the draw knot out with the finger nails. It is difficult to explain the making of this draw knot, therefore we recommend the first fast and neat way of putting the flies on. Always moisten or soften the gut or lash before tying or putting on flies, &c. To attach the fly lash to the line a strong length of gut should be neatly whipped or tied on to the end of the line, with very fine waxed silk, a knot being made on the end of the gut to prevent it from drawing.

HOW TO FISH WITH THE ARTIFICIAL FLY.

One of the main things in fly fishing is the proper throwing of the line; therefore we would recommend the learner first to go to some still water, free from trees, and first practice throwing, having nothing on the line at first but the fly lash of eight feet long. He should have his back to the wind if there is any, and not have too much line out at first, and throw the line as much by the movement of the wrist as by the arm; and in throwing the arm backward, it and the wrist should make rather a circular or round movement, so that the line may do the same, for if an acute angle is made at the return of the lash it would crack off the flies. When the practitioner is able to throw the bare line well, he may then put on one fly at the end, trying again; if that remains on and acts well, he may then try with others

on. It is well to have a bit of wood or something in the water to throw or aim at; and when beginning to fish in good earnest, we would recommend the eight feet lash with three flies on to be used for a long time. In throwing the flies endeavour to make them fall on the water as straight and as light as possible, for on this in a great measure depends success, especially when throwing at a fish you have seen rise. It is best for the learner first to fish most in the roughish streams, or where the water is much ruffled with the wind, to help to hide is imperfect throwing, and keeping his back to the wind that it may assist the throwing, and if the sun shines to have it in his face that no shadow may reflect on the water. When a fish rises at the fly, strike directly, by a gentle movement of the wrist to hook him. When a fish is hooked, if a good one, play him very gently and do not be in too great a hurry, keep him under the spring of the rod and tire him out, only taking care to keep him from getting among weeds, &c. Many fish are lost by being too precipitate. When a fish is brought near the side, take him out with the landing net; if you have got no net, keep him under the spring of the rod with one hand and get hold of the shoulders of the fish with the other: never take hold of the line or you may loose him. In fly fishing be aware of the trees as much as you can that grow by the water, or they

may cause you much annoyance and frequent loss of tackle. In fishing, it is best to angle down the river, throwing across the streams, into the eddies, in the slack between two streams, at the entrance in and the teeming out of deep places. If the water is very low and clear, it is well then to go up the stream, for the fish always lay with their heads up the water, and will not be so liable to be disturbed. If there is a curl on the water on a gloomy day, when the water is clear and low, the best fish may be then caught in the still deeps; it is then good fishing under the trees and bushes in still deep places. When there is no wind it is better not to fish the still deeps, unless throwing at fish that may be rising, and then you may throw the flies directly over them: but when you throw at a fish you have seen rise in the stream, the flies should then be thrown a little above the fish. It is generally good angling after a moderate fresh, as soon as the water is clear enough for the fly; a brown or lingy water is very good for trout: it is seldom good angling directly after a great flood, the water is then in too great abundance, and the fish unsettled and glutted with food. The fly fisher should always take a sufficient quantity of flies of the various kinds, for it is very inconvenient to attempt to be making flies by the water side, by reason of the wind, cold, wet, loss of time, &c.; but if he should go

from home for several days then he should take an extra tackle book, containing his fly making apparatus, feathers, furs, silk, &c. A good pen and pocket-knife is an indispensable article to an angler. In fly fishing for dace, the same flies will do as are used for trout and grayling; but for chub, they are better made much larger. Chub and dace generally take the fly best in very warm and gloomy weather, with very little wind—and that south or west; and in hot weather, they may be taken well by throwing at them when sailing or basking on the top of the water. In fishing for chub or dace, it is better to have a black fly or palmer for the end fly, and point it with a maggot or two; they generally take it much better than the naked fly.

A FULL LIST

OF

ARTIFICIAL FLIES

SUITABLE FOR THE SEASON.

FLIES FOR MARCH.

No. 1.—LIGHT DUN.

Body, yellow or straw coloured silk, and a little water rat's fur over for dubbing.

Wings, made of a light dun feather from the neck of a hen, or from under the snipe's wing. Size of hook in the list No. 1 or 2.

No. 2.—MIDDLE SHADE DUN.

Body, light ash coloured silk, water rat's fur for dubbing.

Wings, a dun hackle feather, a shade darker than the above. Hook, No. 1 or 2.

No. 3.—DARK DUN.

Body, lead coloured silk, and mole's fur dubbing.

Wings, a dun hackle, a shade darker than No. 2, or made of a feather from the merling hawk, or from the but of a mallard's wing.

Hook, No. 1 or 2.

These three flies may generally be depended upon for trout and grayling early in spring and late in autumn, when the weather is cold; and likewise all the season early in the morning and late in the evening in cool weather.

No. 4.—THE RED FLY.

Body, wrapped with brown silk, dubbed with the dark pa[illegible] of squirrel's fur, mixed with claret colou[illegible] ir, showing most claret at the tail [illegible]

Wings, from [illegible] lun covert feather of the mallard' [illegible] e pea-hen has also feathers of the [illegible]

Legs, of a [illegible] ired stained hackle, no feather being [illegible] ally of the proper shade.

This fly to be used on fine but rather windy days.

No. 5.—COCK WING.

Body, the fur of a hare's ear or face, tied o[illegible] with yellow silk, leaving some of the longe[illegible] parts of the dubbing to form legs.

Tail, two small whisks of a rabbit.

Wings, from a feather of the starlin[illegible] wing, slightly stained in onion dye. ([illegible] list of dyes.) Hook, No. 1 or 2.

No. 6.—RED SPINNER OR BLUE DUN

Body, brown silk, ribbed with fine twist.

Tail, two whisks of a red cock's hackle.

Wings, from a mottled grey feather of the mallard, stained to match the colour of the natural wing.

Legs, plain red cock's hackle.

Hook, No. 1 or 2.

No. 7.—WATER CRICKET.

This is an insect that runs on the top of the water; it may be fished with both in March and April, on all kinds of days.

Body, orange floss silk, tied on with black silk thread.

Legs, the two longest feathers of a pewit's topping, or a black cock's hackle; the fibres to be nibbed off to the length of the body.

Hook, No. 1.

No. 8.—GREAT DARK DRONE.

This fly is very dull and dronish till about ten o'clock, when, if warm, it takes flight, and is found on the water: there are several varieties.

Body, mole's fur or black ostrich feather, wrapped with black silk.

Wings, made hackle way, with a lightish dun feather. Hook, No. 2.

No. 9.—COW DUNG FLY.

This fly lasts throughout the season, and is most used when the wind is high.

Body, olive coloured mohair or worsted, tied on with silk of the same colour.

Wings, a red cock's hackle, changed to a brown by putting it into a solution of copperas, or a feather from a landrail or starling's wing. (See Dyes.) Hook, No. 2.

No. 10.—PEACOCK FLY.

This is a small beetle, and is very abundant on warm sunny days. To be used until the end of May, on warm days.

Body, brown peacock's herl with mulberry coloured silk.

Wings, the darkest part of a wing feather of the starling.

Legs, a hackle stained dark purple, that when held up to the light appears a dark, tortoise shell hue. (See dyes.) Hook, No. 1.

No. 11.—MARCH BROWN.

Is in season from the latter end of March until May.

Body, fur of hare's face, ribbed over with olive silk and tied with brown silk.

Tail, two strands of a partridge's feather.

Wings, a feather of a pheasant's wing of the right shade, or tail feather of a partridge.

Legs, a feather from the back of a partridge. Hook, No. 2 or 3.

No. 12.—GREAT RED SPINNER.

This fly is in season until the middle of *May*.

Body, hogs' down dyed red brown, or

orange and brown floss silk mixed, and ribbed with fine gold twist.

Tail, two long whisks of a bright amber red stained hackle.

Wings, from the feather of a starling's wing.

Legs, a bright amber red stained hackle.

Hook, No. 2 or 3.

FLIES FOR APRIL.

No. 13.—GOLDEN DUN MIDGE.

This fly may be used on warm days until the end of May.

Body, olive floss silk ribbed over with gold twist, and tied with dun silk thread.

Wings, from the palest feather of a young starling.

Legs, a plain dun hackle. Hook, No. 1 or 2.

No. 14.—SAND FLY.

This fly may be used from April until Oct.

Body, of the sandy coloured fur from the hare's neck, spun on silk of the same colour.

Wings, from the landrail's wings made full.

Legs, from a light ginger feather from the neck of a hen; or it may be made hackle way, with a feather from the underside of the wing of the throstle: the body as above.

Hook, No. 1 or 2.

No. 14.—STONE FLY.

This fly is in season from April until the

end of May; to be used in rapid streams, and on windy days.

Body, fur of a hare's ear, mixed with yellow worsted or camlet, ribbed over with yellow silk, leaving most yellow at the tail.

Tail, a mottled strand or two of a partridge feather.

Wings, feather from the pheasant's wing.

Legs, a hackle stained greenish brown.

Horns, two rabbit's whiskers. No. 3 hook.

No. 16.—GRAVEL BED.

This fly is not found upon all waters, and lasts about three weeks from the middle of April.

Body, dark dun or lead coloured silk thread made very fine.

Wings, a feather from the underside of the woodcock's wing.

Legs, a black cock's hackle rather long, wound twice round the body; to make this fly hackle way, a dark dun cock's hackle, tinged brown to the above body. Hook, No. 1.

No. 17.—GRANNOM.

This fly is on the water mostly in the morning and evening, and may be used until August.

Body, fur of a hare's face left rough, spun on brown silk; a little green floss silk worked in at the tail.

Wings, feather from the partridge's wing, and made very full.

Legs, a pale ginger hen's hackle. This fly may be made hackle way, with a feather from the back of the partridge neck to the above body. Hook, No. I.

No. 18.—YELLOW DUN.

This fly is to be fished with from ten until three in April.

Body, yellow mohair mixed with a little pale blue fur from a mouse, or yellow silk thread well waxed to give it an olive tint.

Wings, the lightest part of a feather from a young starling's wing.

Legs, a light yellow dun hackle. To make this fly hackle way, a light dun hackle for wings on the above body. Hook, No. 2.

No. 19.—IRON BLUE DUN.

This fly is in season from the latter end of April until the middle of June: to be used on cold days.

Body, blue fur from the mole: reddish brown floss silk may be tied on for the head.

Tail, a whisk or two out of a yellow dun hackle.

Wings, from the breast of the water hen, the tip of which must be used, or the upper end of the wing feather of a tomtit when in full plumage. Hook, No. 0.

No. 20.—JENNY SPINNER.

This is the name given to the iron blue, to be used from the end of April, and lasts all summer on mild days, and towards evening is a killing fly even when the water is very clear.

Body, white floss silk wound round the shank of the hook, and tied on at the head and tail with brown silk, which must be shewn.

Tail, a whisk or two of a light dun hackle.

Wings and legs are best imitated by making this fly hackle way, with the lightest dun hackle that can be procured. Hook, No. 0.

FLIES FOR MAY.

No. 21.—HAWTHORN FLY.

This fly may be used from the latter end of April for about four weeks.

Body, black ostrich herl.

Wings, from a pale blue feather of the sea swallow.

Legs, a black cock's hackle, or two feathers from a pewit's topping. To make this fly hackle way, a black hackle may be used over the above body. Hook, No. 1 or 2.

No. 22.—LITTLE YELLOW MAY DUN.

This fly comes in at the end of May, and lasts for a short time.

Body, pale ginger fur from behind the hare's ear, ribbed over with yellow silk thread.

Tail, one or two whisks from a dun hackle.

Wings, a mottled feather from the mallard, stained olive. (See list of dyes)

Legs, a light dun hackle also stained lightly yellow in the same dye. Hook, No. 1 or 2.

No. 23.—BLACK GNAT.

This fly is in season from May to August.

Body, black ostrich herl.

Wings, the dark part of a feather from the starling.

Legs, a black hackle. To make this fly hackle way, a light dun hackle tinged with brown to the above body. Hook, No. 00 or 0.

This fly made with a black hackle for wings, often takes fish in warm weather.

No. 24.—DOWN HILL FLY.

This fly may be used in May and June, mostly on windy days.

Body, orange floss silk tied on with ash coloured silk thread, which may be shewn at the tail and shoulders.

Wings, from the feather of the woodcock.

Legs, a furnice or red cock's hackle with a black list up the middle, and tinged with black at the extremities of the fibres. This feather should be wrapped all down the body, and the fibres nibbed off leaving some for the legs. Hook, 0 or 1.

No. 25.—TURKEY BROWN.

This fly is to be used from May until the end of June, and to be used on cold days.

Tail, a whisk or two of a red cock's hackle, stained as for legs.

Wings, tip of the brownest feather from a partridge tail.

Legs, red cock's hackle stained a good brown with copperas. To make this fly hackle way, a feather from the grouse may be tied on to the above body. Hook, No. 0 or 1.

No. 26.—LITTLE DARK SPINNER.

This fly is used best late in the evening in May.

Body, mulberry coloured floss silk ribbed over with purple silk thread.

Tail, three or four whisks out of the stained hackle that is used for the legs.

Wings, from a feather of a starling's wing.

Legs, from a purple stained hackle which appears black when looked down upon, but when held to the light, it is of a dark tortoise shell colour. Hook, No. 0 or 1.

No. 27.—YELLOW SALLY.

This fly is for May and to the middle of June.

Body, yellowish buff fur, ribbed with fawn coloured silk.

Wings, from a wing feather of a white hen *stained* pale yellow.

Legs, from an extremely pale ginger hackle, or a white feather dyed of a yellowish ginger tint. Hook, No. 0 or 1.

No. 28.—SKY BLUE.

Body, pale ginger mohair mixed with light blue fur.

Tail, a whisk or two of the hackle used for the legs.

Wings, from the feather of the swallow, or of a very light blue dun hen.

Legs, hackle stained a pale yellow.

Hook, No. 0.

No. 29.—FERN FLY.

Body, orange floss silk tied on with orange silk thread.

Wings, the darkest part of a feather from the starling's wings.

Legs, a red cock's hackle. To make this fly hackle way, a furnice hackle feather, same as in No. 24 fly, must be used to the above body. Hook, No. 1 or two.

No. 30.—ALDER FLY.

This fly is in season from the middle of May until the end of June.

Body, dark mulberry floss silk or peacock's copper coloured herl tied on with black silk.

Wings, from the feather of a brown hen's wing.

Legs, dark amber stained hackle, or in case of need a black cock's hackle will answer

purpose. To make this fly hackle way, rk dun hackle tinged brown may be used ie above body. Hook, No. 1 or 2.

FLIES FOR JUNE.

No. 31.—GREEN DRAKE.

'his fly comes in some time in May, and ı season about three weeks after it has le its appearance.

ody, the middle part is of pale straw co-ed floss silk, ribbed with silver twist; the emities of a brown peacock's herl, tied ı light brown silk.

'ail, three rabbit's whiskers.

Vings, made hackle way from a mottled her of a mallard stained olive, (see dyes feathers.) Hook, No. 5 or 6, fine in the).

No. 32.—GREY DRAKE.

body, the middle part of white floss silk, ded over neatly with silver twist; the ex-nities are of a brown peacock's herl, tied h brown thread.

two, and is excellent to dib with, and also to be jerked into the streams, and on to the water with a long and light rod. (See dibbing or dodding.)

No. 33.—MARLOW BUZZ OR RED BEETLE.

This fly is used in June, mostly in hot weather.

Body, black ostrich herl, twisted with peacock's herl and black silk thread.

Wings, made hackle way, with a dark furnice cock's hackle. Hook, No. 2 or 3.

FLIES FOR JULY.

No. 34.—PALE EVENING DUN.

This fly is most recommended in a fine, clear water.

Body, yellow martin's fur spun on pale fawn coloured silk.

Wings, from a very fine grained feather of the starling's wing, stained of rather a lighter yellow than that which is used for the green drake (No. 31.)

Legs, a pale dun hackle. Hook, No. 0 or 1.

No. 35.—JULY DUN.

This fly is for July, and until the middle of August.

Body, mole's fur and pale yellow mohair mixed and spun on yellow silk.

Tail, two or three whisks of a dark dun hackle.

Wings, dark part of a feather from the starling's wing, stained darker in strong onion dye.

Legs, dark dun hackle.

To make this fly hackle way, a dun hackle may be used to the above body.

Hook, No. 0 or 1.

No. 36.—GOLD-EYED GAUZE WING.

This is rather a scarce insect on some waters, but where it is found it is a very good fly on windy days, from the beginning to near the end of July.

Body, very pale yellowish green floss silk, tied on with silk thread of the same colour.

Wings, the palest blue dun hackle which can be procured, and made hackle way.

Hook, No. 1 or 2.

No. 37.—WREN TAIL.

This fly is best suited for hot days and may be used during July and August.

Body, ginger coloured fur, ribbed with gold twist.

Wings, made hackle way, from the feather of a wren's tail. Hook, No. 0 or 1.

No. 38.—RED ANT FLY.

There are two kinds of this fly—the red and the black ant fly; these flies may be used July and August.

Body, peacock's herl, tied on with *brown silk and* made thick at the botto

Wings, from a feather of the light part of a starling's wing.

Legs, a red cock's hackle.

The black ant fly is made of peacock's herl and black ostrich mixed for body.

Wings, from the darkest part of the starling's wing.

Legs, of a black cock's hackle.

Hook, No. 1 or 2.

No. 39.—SILVER HORNS.

This fly is used most in showery weather, and is suitable for July and August.

Body, black ostrich herl, tied on with black silk thread rather close.

Wings, feather from the wing of the cock blackbird.

Legs, a small black cock's hackle.

Horns, grey feather of the mallard.

To make this fly hackle way, the body is ribbed with silver twist upon the black ostrich herl, and a black hackle wrapped all down the body. Hook, No. 1 or 2.

FLIES FOR AUGUST.

No. 40.—AUGUST DUN.

This fly is an important one for August, and until the middle of September.

Body, brown floss silk, ribbed with yellow silk thread.

Tail, two rabbit's whiskers.

Wings, feather of a brown hen's wing.

Legs, plain red hackle, stained brown.

This fly is made hackle way, with a grouse feather from the top side of the wing, or a feather from the golden hen pheasant, for wings to the above body. Hook, No. 1 or 2.

No. 41.—ORANGE FLY.

This is one of the best flies for trout and grayling, and may be used all day for August.

Body, orange floss silk, tied on with black silk thread.

Wings, dark part of the starling's wing, or the feather of a hen blackbird.

Legs, a very dark furnice hackle. (See No. 24.) Hook, No. 0 or 1.

FLIES FOR SEPTEMBER.

No. 42.—CINNAMON FLY.

This fly is best used on showery and windy days, which at times it is a good fly.

Body, fawn coloured floss silk, tied on with silk thread of the same colour.

Wings, feather of a yellow-brown hen's wing, rather darker than the landrail's wing feather.

Legs, a ginger hackle.

This fly is made hackle way, with a grouse feather from the top side of the wing, or a red hackle stained brown with copperas, and tied on to the above body. Hook, No. 2 or 3.

No. 43.—BLUE BOTTLE.

This is intended to represent the common black fly, and may be used until cold weather sets in.

Body, bright blue floss silk, tied on with light brown silk thread, showing the brown at the head.

Wings, feather of the starling's wing.

Legs, a black hackle from a cock, wrapped down the principal part of the body.

To make this fly hackle way, a dark dun hackle may be put on the above body.

Hook, No. 1 or 2.

No. 44.—WIRLING BLUE DUN.

This fly is for September and October, and to be used chiefly when the weather is cold and blustering.

Body, squirrel's red-brown fur, mixed with yellow mohair, tied on with yellow silk thread well waxed.

Tail, one or two whisks of a pale ginger hackle.

Wings, feather from a starling's wing, not very light.

Legs, pale ginger hackle. Hook, No. 0 or 1.

No. 45.—LITTLE PALE BLUE DUN.

This fly is on the water at the same time as the above, and lasts till the end of the fishing season.

Body, very pale blue fur, mixed with very little yellow mohair.

Wings, feather from the sea swallow.

Legs, the palest blue hackle to be procur

To make this fly hackle way, a sea sw low's feather may be wound on the abo body. Hook, No. 0.

No. 46.—WILLOW OR WITHEY FLY.

This fly is extremely abundant in Septe ber and October, and generally flutters acro the stream.

Body, mole's fur, spun upon yellow silk.

Wings, a dark dun cock's hackle, strong tinged of copperas colour. Hook, No. 1 or

No. 47.—RED PALMER OR CATERPILLAR FI

This fly is principally used after a fres and also on windy days, and are often ma longer to represent the caterpillar.

Peacock's herl wrapped all down the bod of a copper colour, and a red cock's hack wrapped over it, all down from the top of tl hook to the bottom. Hook, No. 3 or 4.

No. 48.—BROWN PALMER.

This fly is used at the same time as tl above (No. 47.)

Body, mulberry coloured worsted, spun c brown silk thread, and a brown stain cock's hackle wrapped over the whole of it

Hook, No. 3 or 4.

No. 49.—BLACK PALMER.

This may also be used the same time as the brown palmer.

Body, black ostrich herl, ribbed with gold twist, and a red cock's hackle wrapped over it. Hook, No. 2 or 3.

No. 50.—ANOTHER BLACK PALMER.

Body, black ostrich herl, ribbed with silver twist, and a black cock's hackle over it.

Hook, No. 2 or 3.

No. 51.—THE CHANTREY FLY.

This fly was a favourite with the late Sir Francis Chantrey, the sculptor.

Body, copper coloured peacock's herl, ribbed with gold twist.

Legs, a black hackle.

Wings, partridge or speckled brown hen's feather or pheasant's tail. Hook, No. 1 or 2

No. 52.—HOFLAND'S FANCY.

This fly was a favourite with the painter, Hofland, particularly when the drake fly was on the water.

Body, reddish dark brown silk.

Legs, a red hackle.

Wings, from the woodcock's wing.

Tail, two or three strands of a red hackle.

Hook, N. 1 or 2.

No. 53.—PARTRIDGE FLY.

This is a very good fly, to be used from April until October, on gloomy and rather windy days.

Body, yellow silk or a light orange, with a little hare ear fur for dubbing.

Wings, made hackle way, with a speckled feather from the back of a partridge, without bar stripes. Hook, No. 1 or 2.

No. 54.—MOOR-GAME FLY.

This is a good fly for a brown or fresh water, and may be used from April until August.

Body, orange floss silk, tied on with orange silk thread.

Wings, made hackle way, from a dark speckled feather from the back of a cock moor-game or grouse.

No. 55.—LITTLE PURPLE FLY.

This is a little fly that flutters about the banks of rivers and canals, and is a good fly to fish near the banks of canals and rivers for dace and chub.

Body, purple silk slightly waxed.

Wings, a small purple feather from the neck of a cock pheasant. As this feather is very small it may be made fuller by putting two feathers on for wings. Hook, No. 1.

N.B.—The number or size of the hook is a guide for the size of the fly.

It is to be observed, that no exact period can be fixed on for the coming in of the spring flies; that depends on the forwardness or the lateness of the season: of course they will be earlier in a mild and forward season and backward in a cold and late one.

The flies of the foregoing list are all calculated to take fish well at their proper times and seasons. As the list is a very full one, there may be more than many anglers would like to keep a stock of having three or four of each kind, therefore we have endeavoured to assort or reduce the quantity so as to give those flies that are of longest duration, or that may be called standard flies, such as No. 1, 2, 3, 19, and 40, to be a sufficient stock of duns for all the season; and of the other kinds, No. 9, 10, 11, 14, 17, 20, 23, 33, 37, 41, 43, 46, 47, 48, 49, 50, 53, and 54. This, also, may be far too many yet for most anglers, therefore we will again reduce the list. leaving the duns or first five flies as they are, then we will suppose No. 9, 14, 23, 33, 37, 41, 43, 46, 47, 49, 50, 51, and 53. The duns are best used early and late in the season, and on very cold days, and early in cool evenings, and are often taken well in clear water. The other flies may be used as directed in the list. The above nineteen flies are intended for trout and grayling. The flies for dace and chub should be only those that are adapted for the summer and autumn

seasons, such as Nos. 9, 31, 37, 40, 43
48, 49, 50, 51, 52, 53, and 55. For dac
trout sized flies should be used, and
will also do for small chub; but for ta
large chub, pretty large flies should be

A LIST OF MATERIALS

SUITABLE FOR

MAKING ARTIFICIAL FLIES.

Hackles, or the small feathers from the necks of cocks and hens, are some of the most useful feathers for the making of artificial flies: the most useful colours are the black and the black with red edges, red, dark and light ginger grissell; and none are more useful to the trout fisher than the various shades of duns, and particularly those with yellow edges. Also white foathers from the necks of cocks and hens, for dyeing different colours, Also, faethers from the partridge's breast and back, from the back of the grouse, from the pheasant's neck and tail; and also the wings of plovers, landrails, water hens, snipes, starlings, fieldfares, jays, merlin hawks, brown owl; likewise feathers from the blackbird, thrush, wrenstail, peacock's herl, green and copper coloured, black ostrich herl; fur from the fox's and hare's ears and necks and from the neck of the martin; furs from the water rat, mole, and mouse; also, furs from muffs and sables, mohairs, camlets, and the

colours from old carpets; also, hogs' down, dyed different colours; likewise, very fine silk, of the following colours:—black, purple, crimson, brown, dark and light orange, two or three shades of light and dark lead and ash colours, very fine, to tie the flies with. There requires floss silk, also, for making bodies, of the following colours:—light and dark brown, orange, olive, green, white, bright blue, straw colour, and fawn colour. Take notice, that in the selection of feathers for making hackle and palmer flies that they are small—that is, long and narrow in the feather and short in the strands, so as to make neat and small flies. Strip off the bottom or useless parts of all small feathers, and paste them by the stems betwixt narrow shreds of writing paper, and keep them in a book. The furs, down, herls, and silk may also be kept in a book, the skeins of silk being cut about nine inches long, and wrapped round with paper, and drawn out as wanted.

DIRECTIONS FOR MAKING ARTIFICIAL FLIES.

In the making of artificial flies, it is most handy to have a very small and light pair of vice, about 3½ inches long, made to screw into a bit of board or wood, to hold the hook; also a pair of small spring nippers, 2½ inches long, made out of a bit of wire bent round or with a bow at one end, to take hold of the stems of the feathers, herls, twist, &c, and also occasionally to hang on to the silk you

are dubbing with to keep it tight; and likewise a pair of short-bladed and fine pointed scissors, to cut and trim with.

Artificial flies are of three kinds—the hackle, the wing, and the palmer (see plate.) To make a fly—suppose a hackle—put the hook in the edge of the vice, at that part of the bend next to the barb, slanting it a little upwards, then flatten the gut near the end with your teeth to prevent it from drawing, wax the end of a bit of fine silk thread of the colour required, about nine inches long, tie on the gut to the hook near the bend inside, then add the fur or herl intended for dubbing for the body; if fur, twisting it in with the silk before wrapping it round the hook, or otherwise wrapping the dubbing on the hook, and then following with the silk to fasten it on, wax the silk again, then taking a hackle feather, suppose from the neck of a hen, fasten the extreme end, and then with the nippers wrap it round keeping it as tight as it will bear, each round being close to the other in the direction of the head of the fly, then fasten the end of the feather. form the head of the fly, and fasten the silk by looping and drawing it close, having the silk well waxed to make it secure. If the fly is intended for a palmer, take a cock's hackle of the colour required, and wrap it all down the hook, beginning next the bend. and fasten it, forming the head at the top. When a wing fly is intended, wrap a very small hackle on

for legs, same as making a hackle fly, only a little nearer the bend of the hook, and then put a bit of feather the proper colour to represent wings, tying it betwixt the end and the legs on the top side of the hook. In some flies the feather is divided, so as to form a pair of wings, by passing the silk between and making the wings stand up by wrapping the silk close under, or otherwise by first putting the feather for wings contrary way and wrong side out at first, and then turning it back again. In many flies the wings are not divided; this is partly at the option of the maker, but if neat and proper coloured feathers can be got to make hackle and palmer flies, which are the soonest and easiest made, no other need be required, for they will kill fish as well as any other. Wing flies are mainly made because proper feathers of the colour required cannot be procured for making hackle way; and although flies must be better for being neatly made, the principal thing to be observed is, that they exhibit the prevailing colours that are found in the natural fly they are intended to represent Always make all flies on very fine round gut, if for droppers, about 3½ inches long; those for end flies, on whole lengths of very fine gut. It is better to procure or have wax of various colours, instead of the common black shoemakers' wax. The horns and tails of *flies may* be put to when first tying on the *hook.*

RECEIPTS FOR DYEING & STAINING FEATHERS.

1st.—*To dye white Feathers a dun Colour.*

Make a mordant by dissolving about a quarter of an ounce of alum in a pint of water, and slightly boil the feathers in it, taking care that they be thoroughly saturated; then boil them in another water with fustic, shumack, and a small quantity of copperas put into it, until they have assumed the required tint. The fustic and copperas will make a yellow dun tint, the shumack and copperas a blue dun tint, and the larger the quantity of copperas, the deeper will be the die.

2nd.—*To turn red Hackles brown.*

Put a piece of copperas, the size of half a walnut, into a pint of water, boil it, and whilst boiling, put in the red feathers; let them remain until they are found to have taken the proper colour.

3rd.—*To stain Feathers an olive dun.*

Make a very strong infusion of the outside brown or coatings of the onion root, by allowing them to stand warm by the fire for about twelve hours. If dun feathers are

boiled in the dye, they will become ai
dun, and white feathers will become a y
If a small piece of copperas be add
yellow colour will become a darker
yellow, or changed to a yellow olive d
cording to the quantity of copperas
These are useful feathers.

*4th.—To dye a Mallard's Feather fo
green Drake.*

Tie up some of the best feathers in b
of a dozen each, and boil them in the
mordant as given in No. 1, merely to
grease out that they may take the dye
boil them in an infusion of fustic
duce a yellow, and subdue the bright
this yellow by adding copperas to t
fusion.

5th.—To dye Feathers dark red and p

Boil hackles of various colours (v
alum) in an infusion of logwood and
wood dust, until they are as red as th
be made by this means. They m
changed to a deeper red by putting the
a mixture of muriatic acid and tin, an
changed to a purple by a warm solu
potash. As the muriatic acid is no
saturated with tin, the solution must
luted with water. If the solution burn
tongue, it will be apt to burn the fea
little, in which case make it weaker.

6th.—To dye Feathers various shades of red, amber, and brown.

First, boil the feathers in the alum mordant, (see No. 1;) secondly, boil them in an infusion of fustic, strong enough to bring them to a bright yellow, about a table spoonful to a pint of water; then boil them in a dye of mather peech wood, or Brazils wood, to set the colour; put a few drops of dyers' spirit, that is nitrate of tin combined with a quantity of common salt, which may be had from a silk dyer. This must be put into the last mentioned wood dye.

7th.—To stain silk, gut, hair, &c., the colour of Weeds, &c.

Make an infusion of onion coatings, (see No. 3,) put the gut or hair into it when quite cold, and let it remain until the stain becomes as dark as may be required. Gut may, in an infusion of green tea, be stained a useful colour for some waters, and a weak dye of logwood will turn it to a pale blue.

HOW TO COOK FISH.

Scale, gut, wash, and wipe them, lay them in a dish or pan, season with salt, dridging a little flour over them, then put sufficient butter in and on to cook them, doing them in a moderate oven; then make a little melted butter sauce, and pour it on a little parsley chopped very fine. When the fish are put upon the dish, garnish the edges with sprigs of parsley and serve up. If the fish are many and very small, they may be potted thus: After cleaning them, cut their heads and tails off, season them with salt and a very little pepper, and then pack them into a pot, but not to fill the pot full. If some of the fish are too long for the pot, cut them into pieces, then add a quantity of butter to cook them, stewing them in the oven for six or eight hours until the bones are dissolved, taking care they do not get too dry or burn; if they do, add more butter. When taken out of the oven and nearly cold, pour a little butter melted over the top, as in making potted beef, and use it in the same manner.

OBSERVATIONS ON THE WEATHER AS RELATES TO ANGLING.

The winds and the weather have great influence upon the angler's success. Fish generally bite best in a south or west wind; the east and north are the worst, especially the east winds in spring are often very cold and piercing, and have an unpleasant effect upon both the animal and vegetable creation. Fish never bite well in an east wind, except pike, or before much rain or thunder storms, or in hurricanes of wind or when it blows in sudden gushes, or in a sudden change from warm to cold weather, or when many small whirlwinds and running points are observed on the surface of the water, caused by the air, which is a bad sign. A white or hoar frost in a morning is a bad sign, and also when the air is cold and the clouds look thick like rocks; or when the sky is perfectly clear or free from clouds. Therefore, an east or north wind, a frosty morning, a clear sky, and clear water, are a combination of the most unfavourable signs for the angler.

The most favourable signs for success are, a gentle south or west wind, a rather gloomy and settled sky, or after gentle warm rain when the morning is grey, with a little dew

upon the grass, and also when there has been gentle rain in the night, and also when the night has been clear and the day overcast, also when the wind blows smooth and regular and the clouds have a broken and light, misty appearance, when the water is moved by a gentle ripple, and when the wind changes from east to south or from north to west. A south or west wind, therefore, a grey soft morning, a warm, fair, gloomy day, with a gentle wind, are a combination of the best signs the angler could wish for.

PROGNOSTICATIONS OF THE WEATHER.

SIGNS OF RAIN.

When the sky looks very red and lowering at sunrise, or if the red extends far in the sky, rain or probably both wind and rain will follow during the day. If the sky looks a sea green colour betwixt the clouds, towards the horizon, it is a sign of wet weather. If the sky is regularly overcast and small black clouds are seen floating on the surface, much rain may be expected. When the sun rises red and fiery, there will be wind and rain. When the sun has a white and watery appearance, the vapours being high in the air. it is a sign of rain. When there is no dew on the grass in the morning, there being little or no wind, rain will generally follow.

A white or hoar frost in the morning, either in spring or autumn, with clouds, hasiness, or mist in the sky, portends rain.

When the clouds look heavy, and seem to drag along the hills, or if there are two currents of clouds, it is a sign of rain.

When the clouds look thick and rocky, their edges being clear or well defined, it foretells—in spring, hail storms or heavy show-

ers; in summer and autumn, thunder storms or heavy rain.

When clouds appear to increase fast or swell out, it foretells rain, if in summer, thunder storms.

When the clouds appear to fly swift in the air, it foretells windy weather; and if there are two currents of clouds, the underneath flying quick, a sign of wind and rain.

When the wind changes about much, it is a sign of rain; and when it makes a whistling or howling noise, or when it whirls the dust round about, rain may be expected; and also when the wind is very unsteady and blows in gusts or gushes, is is a sign of stormy weather.

If after fair weather clouds appear high in the air, like the tails of horses, or seem streaked or spreading out in different directions, wind or rain may be expected.

When the smoke damps down from the chimney top and seems to hang about the ground it is almost a sure sign of rain.

Before rain, birds do not sing much, swallows fly very low, dogs and other animals appear more sleepy than common, waterfowl dive much, and toads crawl about. Fish will not bite before much rain and bad weather. Rheumatism and corns are more painful to the human body, people feel sleepy and yawn much, and often feel dull and low in spirit and cannot assign any cause for being r All these are signs of rain or wet weathe

During the summer months the rains are often very partial and irregular, and generally not of long duration, being then much under the influence of thunder or electricity. In spring, late in autumn, and winter, the rains generally cover a greater extent of ground, and are then of longer duration.

SIGNS OF FAIR WEATHER.

When the sky is red at sunset, and the morning after has a grey appearance, a fine day may be expected.

If little or no red appears on the clouds at sunrise, when it reflects upon the clouds, the day will generally be fair.

When the sky looks of a deep blue colour, the clouds not looking too heavy or rocky, a fair day may be expected

When the sun rises white and cloudy and the clouds soon decrease, certain fair weather.

When there is a strong dew on the grass in the morning, the previous day having been fair, another fine day may be expected: if in summer, a hot day; if but moderate dew on the grass and the sky is overcast, it probably will be a fair, mild, gloomy day.

When the clouds are high up in the air, and seem of a light broken appearance, it will be fair. If the clouds appear to have no motion, and also when there is only one course of clouds and they have a light, misty and broken appearance at the edges, also

when clouds decrease and vanish away, t
are all almost sure signs of fair weather

If there is a strong, light mist in the
leys in the morning, and the hill tops
clear, a fine day may be expected; and
summer, a hot one.

If the wind keeps steady at one point
blows regular, the weather being fair, it
be fair weather for some time; and at
time if there is little or no motion in
clouds above, it will probably be succe
by calm weather below.

When the smoke rises direct up from
chimney top it is a sign of calm, fine, v
weather; and if the smoke rises freely
the chimney in a slanting direction upw
and there is not much wind, it foretells
healthy, fair weather.

When birds sing much, swallows fly l
animals seem cheerful and lively, and
people feel light, healthy, and in good sp
all these are almost sure signs of fine
fair weather.

A barometer is a very useful instrum
it may save many a fisherman many a
coat and useless journey by observin
We think a wheel-barometer is best, bec
when tapped lightly with the finger it
show the least change up or down.

CONCLUDING HINTS AND CAUTIONS TO ANGLERS.

Always keep your tackle in good repair and in regular order; and before going out for the day fishing, it is best to have what you want laid in readiness the night before, for, if not, in the hurry of the morning some important things may be left behind. It is not a bad plan to have cards of the different methods of angling, with the different articles required inscribed thereon, and refer to them as a check against mistakes. Some who have written on angling have said, "Don't forget the brandy and spirit bottle." We say, don't think anything about it; for man makes brandy, and God made water, and you may always get plenty of that which is best, for nothing. We would rather say, don't forget the crust of bread, the farm house, and the new milk.

When out angling, if you should see a violent storm coming on, seek in time some permanent shelter, instead of trusting to trees or bushes, and if you have got very wet at any time, avoid sitting or standing still long in wet clothes, but keep up the regular heat of the body by continuing in action, and changing wet clothes for dry as soon as convenient.

When over heated by violer
in a state of profuse perspiratic
ing large draughts of very col
other cold liquid, we mean t
cold springs or from deep wel
a little at a time, holding it i
short time before swallowing.
brooks or running rivers that
and rarified by the sun and ai
drunk with moderation when
and particularly if the exercis
also, when in that state, avoid
water or sitting still in very
exposing yourself to cold dr
when in any overheated state.
precautions may prevent mar
and inflammatory disorders ca
sudden transition from hot to

If you value your health and
what is called wading fishi
standing in the water, for t
few more fish, is more than c
by the discomfort, fatigue, and
ger afterwards to the health.

Avoid sleeping in the hot s
sitting on the damp ground :
for rest and refreshment are q
places. A small oblong or oval
ten inches by seven, stuffed w
or wool, having a gutta perch
tom, makes a very dry and c
by the water side.

When out on your fishin

trespassing, and when discharged from any place, do not go again without leave.

Do not make a practice of magnifying any of your fishing exploits, or telling what some call harmless lies: it is a bad practice. Telling lies can never be harmless; always let your conversation be based upon the firm and everlasting rock of truth, then the satisfaction and confidence of others will be your reward.

If angling is your hobbyhorse, do not ride it too hard, that is, do not let it prove more expensive than your reasonable means will allow, nor be following it to the neglect of more urgent and important business. Remember those are the sweetest and most lasting pleasures that leave no regrets behind them.

loud, or the flowers smell so sweet s
times, yet they are always cheerful, p
and contented. Nature, when dressed i
mantle of green, generally wears a sm
face, and the breezes blow healthily: all
are calculated to draw the mind fron
creature up to the Creator, and in al
storms and trials of life in God is the ha
of refuge and the port of consolation.

May we in this our healthful recreation,
With pleasant angling join some useful con
templation.

B. LEADER, INDEPENDENT OFFICE, 81

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